Optivity Telephony Manager

Common Services

User Guide

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Overview of Optivity Telephony Manager

Optivity Telephony Manager (OTM) provides a single point of access and control for Nortel Networks Meridian™ system management. OTM uses IP technology to target the following key customer values:

- single point of connectivity to the Meridian 1 and related devices
- single point of data collection for traffic and billing records
- single point of collection, processing, distribution, and notification for alarms and events
- single point of data entry and propagation (employee names and telephone numbers shared in multiple databases)
- Web-based management applications

OTM contains all of the Meridian Administration Tools (MAT) Microsoft® Windows® applications. In addition, OTM introduces new Web applications and integration with Optivity NMS.

OTM provides value by acting as a management server. It collects and processes alarms from multiple devices (Meridian 1, Call Pilot, ITG, etc.), collects call accounting and traffic data from multiple Meridian 1 systems, and acts as a terminal server for multiple devices. One OTM Windows NT® Server replaces multiple buffer boxes, access modems, and terminal servers.

OTM may be installed in a standalone configuration without client support or Web applications, to run on a PC running Windows 95/98 or Windows NT version 4.0. System access is provided through the OTM Windows System Terminal, and security management through the OTM User Administration.

Technical documentation

OTM technical documentation consists of an Installation and Engineering Guide and eight user guides. Table 1 outlines the contents of the various guides in the OTM documentation suite. The entries in the second and third columns indicate whether the information in that section applies to:

- OTM Windows Navigator, which is the Microsoft Windows-based interface
- OTM Web Navigator, which is the Web (http) interface
- both interfaces

Table 1
OTM 1.0 Technical Documentation Content (Part 1 of 6)

Book Title	Microsoft Windows	Web	Contents
Installation and Engineering Guide	X		**Initial Installation Tasks:**
	X		OTM requirements
	X		Installing a server
	X		Installing a client
	X		OTM server software installation
	X		Serial numbers and keycodes
	X		Java runtime environment (JRE)
	X		OTM client software installation
	X		Upgrades, migration, licensing
	X		Installing Web help and documentation
			(continued)

Table 1
OTM 1.0 Technical Documentation Content (Part 2 of 6)

Book Title	Microsoft Windows	Web	Contents
Installation and Engineering Guide *(continued)*			*(continued)*
	X		**Initial configuration tasks:**
	X		Logging in, changing the default password
	X		Testing the connection
	X		Setting up OTM applications
	X		Adding sites, systems, Windows users
	X		Adding Web users
	X		Setting up the Meridian 1
	X		Setting up the Virtual Terminal Service
	X		Setting up data buffering and access (DBA)
	X		Setting up the LDAP server
	X		Setting up alarm management
	X		Performing an OTM backup
	X		Installing a Web browser client
			Windows NT installation example
			Configuring a Windows NT server
			Windows NT security guidelines
			Modem configuration for OTM applications in Microsoft Windows
			Integrating OTM with Optivity NMS
			OTM engineering guidelines

Table 1
OTM 1.0 Technical Documentation Content (Part 3 of 6)

Book Title	Microsoft Windows	Web	Contents
Common Services User Guide	X	X	**Overview of Optivity Telephony Manager**
	X		**OTM Windows Navigator**
	X	X	**Configuring sites, systems, and users**
	X		**Regular maintenance tasks**
	X		**Services and utilities:**
	X		Scheduler
	X		Import and export utilities
	X		Corporate directory
	X		Database compact/repair utility
	X		Regional settings
	X		Access server
	X		Backup and restore
	X		Directory services
	X		Using LDAP synchronization
	X		Electronic data dump
	X		Event log viewer
	X		System terminal
			System monitor
		X	Web services
	X	X	OTM Web Navigator
	X	X	Virtual terminal service
		X	Desktop services (for administrators and end users)
	X		**Data buffering and access (DBA)**
	X		**Script file summary**
	X		**Scheduling maintenance tasks**

Table 1
OTM 1.0 Technical Documentation Content (Part 4 of 6)

Book Title	Microsoft Windows	Web	Contents
Alarm Management User Guide	X		**Alarm management configurations**
	X	X	**Alarm browser**
	X		**Meridian 1 alarm management**
	X		Alarm banner
	X		Event monitor window
	X		**Alarm notification**
	X		Notification process
	X		Setting up alarm notification
	X		Events processing
	X		Scripting
	X		Script wizard and sample scripts
	X		**Working with control files**
	X		Files: devices, configuration, scripts
Maintenance Windows User Guide	X	X	**Launching maintenance windows applications**
	X		**OTM maintenance windows**
	X		Core CPU
	X		I/O Ports
	X		Network Groups
	X		Network Loops
	X	X	PE Shelves
	X	X	PE Cards
	X	X	PE Units
	X		B- and D-channels
	X	X	**Inventory reporting**
	X	X	**Maintenance pages**

Table 1
OTM 1.0 Technical Documentation Content (Part 5 of 6)

Book Title	Microsoft Windows	Web	Contents
Station Administration User Guide	X		**Getting started:**
	X		Retrieving and updating system data
	X		**Station administration:**
	X		Station data and synchronization considerations
	X		Station administration windows and menus
	X		Accessing station data
	X		Adding and deleting stations
	X		Swapping TNs
	X		Managing station data
	X		Designation strips (DNs)
	X		Station data validation
	X		Directory Service
	X		Architecture, links, integration
	X		Excess DN report
	X		Station and directory synchronization
	X	X	Desktop Services
	X		**Using station administration features:**
	X		Call Party Name Display (CPND)
	X		Corporate directory
	X		List manager
	X		Voice mailbox
	X		Global update
	X		**Communicating with a Meridian 1**
	X		**Conversion utility**
	X		**Reporting:**
	X		Generating reports
	X		OTM file viewer
	X		Designing report forms
	X		**Power user tool**

Table 1
OTM 1.0 Technical Documentation Content (Part 6 of 6)

Book Title	Microsoft Windows	Web	Contents
ESN Analysis and Reporting Tool User Guide	X X X X X		**Synchronizing the OTM ESN database and the Meridian 1** **Updating the V&H table** **Printing ESN reports** **ESN Setup wizard**
Telecom Billing System User Guide	X X X		**Configuration** **Operating procedures** **User reference**
Call Tracking User Guide	X X X		**Collecting data from a Meridian 1** **Call tracking menus** **Sample setup for real time monitoring**
Traffic Analysis User Guide	X X		**Configuration** **User reference**

Conventions used in this guide

This guide uses the following typographical conventions:

- User input—**This font** alerts you to information that you enter on your keyboard; or, using your mouse, this font indicates buttons to click or menu selections to make.
- Multi-lettered keys—Angle brackets denote a single multi-lettered key on your keyboard. For example, **<Esc>** denotes the Escape key, labeled *Esc* on PC keyboards.
- Key sequences—Keys that you press at the same time include at least one multi-lettered key and are not separated by spaces in text. For example, **<Alt>V** instructs you to press the **<Alt>** and **V** keys at the same time.
- Hot keys—You can access menu commands by using the mouse or your keyboard. Menu items show one letter as underlined. To choose a menu item from the keyboard, hold down the **<Alt>** key and press the underlined key. For example, press **<Alt>F** to open the **File** menu.

Overview of OTM applications

OTM 1.0 includes the following new or enhanced Windows-based applications:

- Enhanced Station Administration/CPND
- New Directory Service with LDAP support
- New Telecom Billing Service (TBS), which replaces MAT Call Accounting
- Data Buffering and Access (DBA)

OTM Windows-based applications can operate in either server or standalone mode on a PC running Windows NT version 4.0. It also can operate in client mode on a PC running Windows 95/98. For more information about configuring OTM in standalone mode, refer to “Standalone configuration” on page 42. For more information about configuring OTM in client mode, refer to *OTM Installation and Engineering Guide* (P0910102).

The following MAT 6.6 applications are supported in OTM:

- List Manager
- ESN
- Traffic Analysis module
- Call Tracking application
- Corporate Directory
- IP Telephony Gateway (ITG) applications
- Inventory
- Maintenance Windows
- Alarm Notification

OTM provides the following Web-based (http) applications.

- OTM Web Navigator
- Virtual Terminal Service
- Web System Terminal
- Web Station Administration (Desktop Services)
- Web Alarm Browser
- Maintenance Pages (provides a subset of Maintenance Windows functionality)
- Customizable Web Help
- Web User Access and Session Monitor pages
- Desktop Services that provides Web pages to display directory and telephone configuration

Comparison of OTM Windows and OTM Web interfaces

You can access OTM using either OTM Windows Navigator or OTM Web Navigator. You can perform many basic configuration and management tasks through either interface. This section describes the similarities and differences between the OTM Windows Navigator and the OTM Web Navigator.

OTM Windows Navigator

OTM Windows Navigator gives you access to nearly all of OTM managed systems. Through menus and folders you can:

- view, configure and administer sites, systems and users
- configure and administer OTM services
- launch utility applications
- display licensing and release information for all installed OTM applications

The OTM Windows Navigator displays sites and systems in a tree structure. When you choose a system on the tree you can launch a System window to configure the system and launch management applications. The OTM System Navigator window displays all connected systems. When you select a system the list of available applications appears in the window. The OTM Windows Navigator system access depends on the privileges assigned to your user ID at the Meridian 1 site. For a list of available functions and applications, refer to Table 2 “Comparing Windows and Web Navigators”.

OTM Web Navigator

The OTM Web Navigator provides a number of the same functions available in the OTM Windows Navigator. The OTM Windows Navigator allows you to view, configure and administer sites, systems, and users. OTM Web security meets the same criteria as provided by Windows NT.

One of the advantages of the OTM Web interface is the ability for users to configure their telephones through their Web browser. As an administrator, using Web Desktop Services, you can also block end user access to configuration screens. A particularly useful Desktop Services feature is the ability to customize the help files to suit specific customer needs.

Table 2
Comparing Windows and Web Navigators

OTM Windows Navigator	OTM Web Navigator
Common Services	
Ability to launch other applications Scheduler Backup & Restore (OTM Data) Import/Export PC Event Log Compact and Repair License management Related utilities	Data Buffering and Access Event Service System Sanity Terminal Server Trap Master Trap Server

Table 2
Comparing Windows and Web Navigators (Continued)

OTM Windows Navigator	OTM Web Navigator
Fault Management	
PC Event Log and Viewer Event Monitor Alarm Banner Alarm notification by: • pager • email • file • SNMP trap forwarder	Alarm Browser (consolidated systems) • manage alarms from core PBX, Meridian Mail, ITG, SCCS and Call Pilot.
Configuration Management	
Station Administration Directory Editor LDAP Query utility LDAP Synchronization Corporate Directory Maintenance Windows • real time status of hardware PBX • sorting by type or status • enable, disable, test ESN ITG Configuration DBA Backup & Restore List Manager Inventory	Maintenance Pages (sub-set of Maintenance Windows functions) Customizable Web Help LDAP Synchronization Report Global Change Desktop User Access Web Navigator Access Session Monitor

Table 2
Comparing Windows and Web Navigators (Continued)

OTM Windows Navigator	OTM Web Navigator
Accounting Management	
Telecom Billing Services (TBS) • analyzes CDR from multiple switches • pre-defined reports • customization of reports Call Tracking	
Performance Management	
Traffic Analysis	
Security Management	
OTM User Template Administration	Web Maintenance Pages Web Navigator Access Security (Admin Login - Local Domain Security) Web Desktop Access Security using WinNT security Web Desktop Access Security using LDAP security
System Access	
Windows System Terminal	Web System Terminal
End User Applications	
Windows Help	Web help End User Desktop Services

Common Services

The OTM Common Services are similar to the MAT Common Services. Most have been enhanced for OTM; several are new. The OTM Common services are:

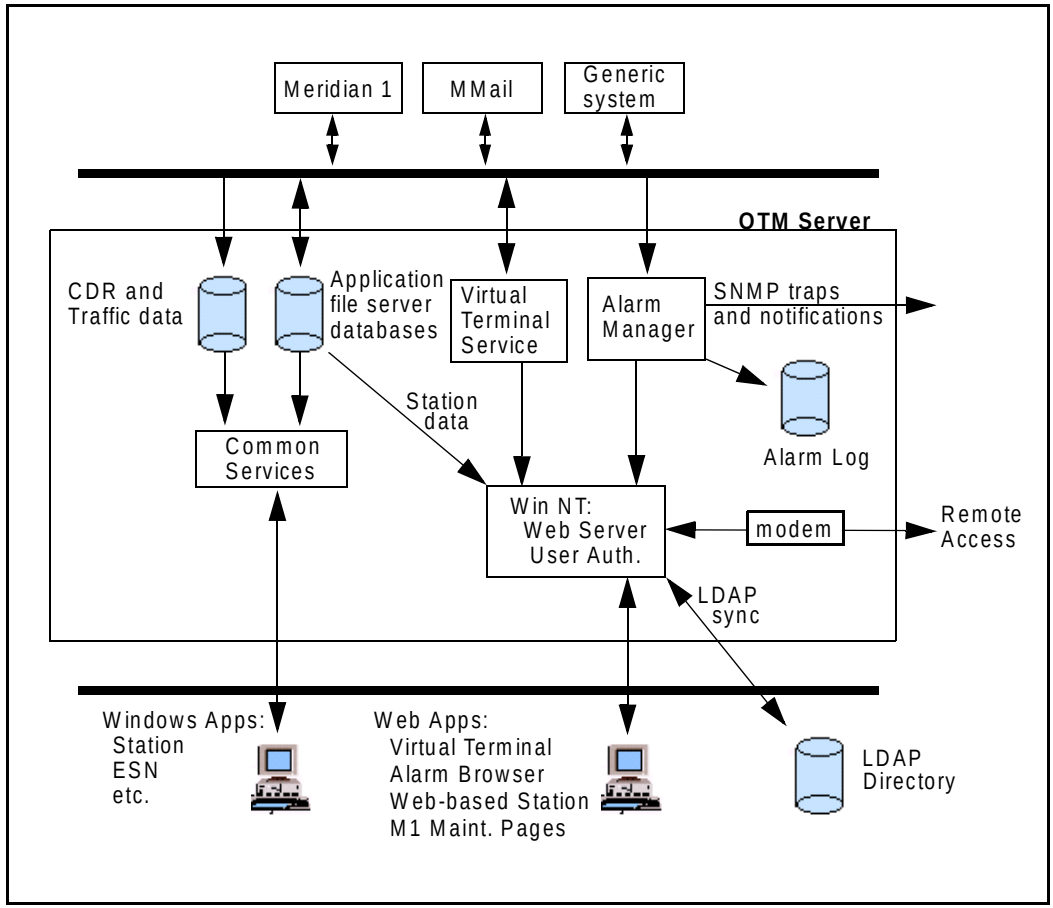
- OTM Windows Navigator and OTM System windows
- OTM Windows based System Terminal
- New Import and Export Utilities
- New Compact and Repair Utility
- Enhanced 32-bit Scheduler
- Enhanced PC Event Log Viewer
- Enhanced Database Access and Buffering (DBA) and Station Fast Sync
- OTM user administration
- OTM Backup and Restore
- New System Monitor on the OTM server
- License management
- NT Client capability

OTM Server

The OTM server runs on a Windows NT Server or Workstation. It performs the following functions:

- Virtual Terminal Service provides single point of connectivity to the Meridian 1 and related devices
- Common Services and file server for OTM client applications
- Database Access and Buffering (DBA) collects and stores CDR and Traffic data
- Web Server for OTM Web-based applications
- Alarm and event collection, processing, distribution, and notification
- Run other management applications such as Call Pilot

Figure 1
OTM Server block diagram



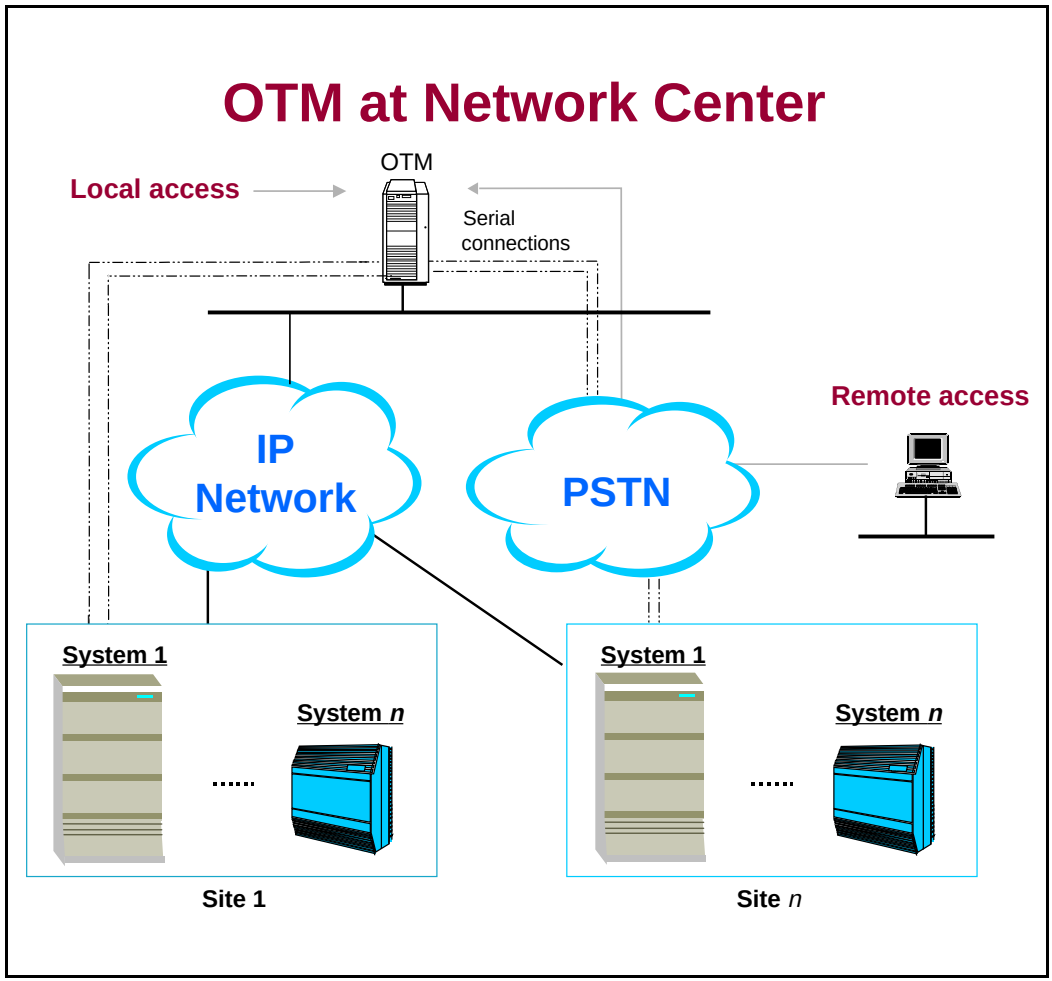
Configurations

Network model

OTM can manage voice switches in both a centralized and local manner.

Centralized management is geared towards network management centers, whereas local management is geared toward site level telecom managers.

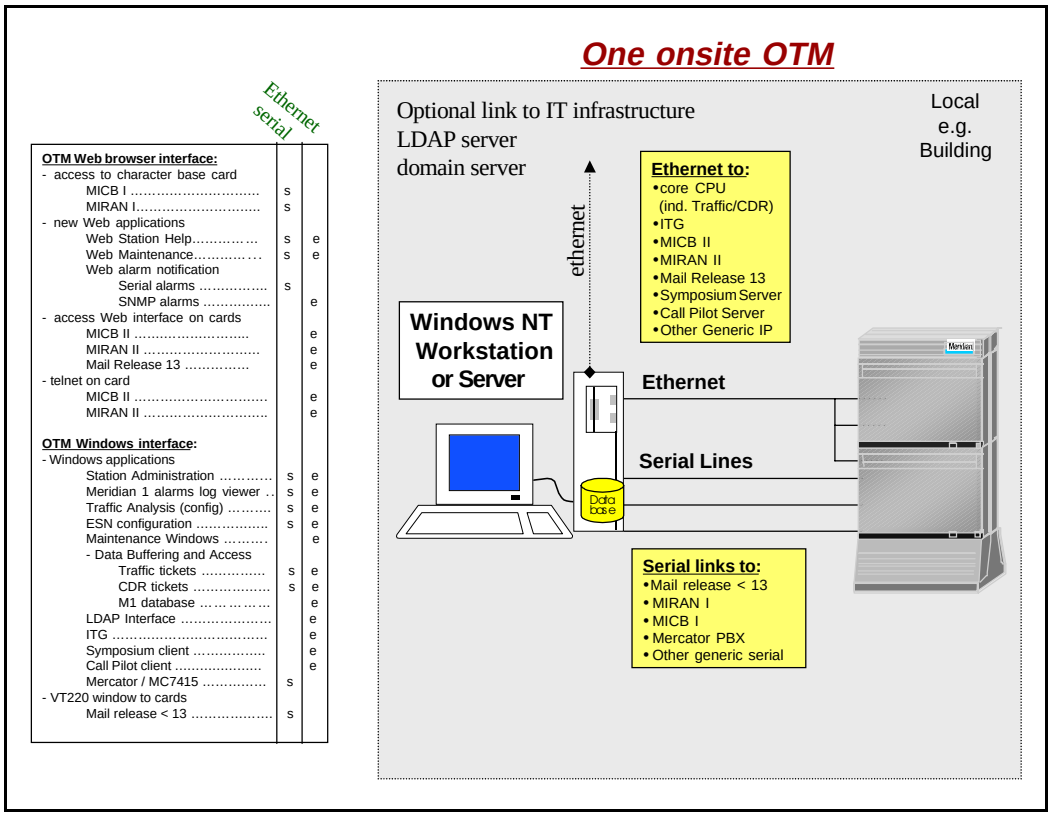
Figure 2
OTM Network model



Site model

Figure 1 shows an example of a single OTM as a Site Manager supporting multiple voice devices in a single site. Client/Server acting applications (Web or Windows) can be run on the OTM server or remotely via IP or dial in connections.

Figure 3
OTM Site model



Standalone configuration

OTM may be installed in a standalone configuration. The standalone configuration can run on a Windows 95, Windows 98 or Windows NT 4.0 PC. An OTM system configured as a standalone does not allow for remote clients or Web-based applications. System access is provided through Windows System Terminal, and Security Management is accomplished through OTM User Template Administration.

Common Services available in a standalone configuration include:

- Windows Navigator
- Scheduler
- Backup and Restore (OTM data)
- Import/Export
- Compact & Repair

In the area of fault management, when installed in a standalone configuration, OTM provides a sub-set of the functionality available when installed in a network. The standalone configuration can be set up to forward alarms to Optivity NMS. An enhanced PC Event Log and viewer is available along with an Event Monitor which allows you to view Meridian 1 alarms. Alarm Banner is included for core alarms, and Alarm Notification permits handling, filtering and forwarding (including forwarding to numeric and alphanumeric pagers).

Call accounting is accomplished using the Telecom Billing System (TBS). Data Buffering and Access (DBA) provides real time collection of Call Detail Recording (CDR) and Traffic data via IP. Data collected by DBA or via buffer box can be used by Traffic and TBS to generate reports.

The standalone configuration supports the following configuration management and maintenance activities:

- System Window
- Station Administration
- Directory Editor (including Employee Editor and others)
- Directory Service with integration with Station Administration
- Lightweight Directory Access Protocol (LDAP) query utility
- Corporate Directory (export station data, MAT functionality)
- Maintenance Windows
- Electronic Switched Network (ESN)
- Internet Telephony Gateway (ITG) configuration
- DBA Backup and Restore (X11 database)
- List Manager
- Inventory

Connectivity through OTM

The Virtual Terminal Service provides the connection between your browser and a device or system. You can launch the OTM Web Navigator from a Web browser such as Internet Explorer or Netscape Navigator, and select a Meridian 1 system or other device to view.

You can access those systems and devices using OTM's Web System Terminal window from within your Web browser, without referring to IP addresses, serial port settings, or URLs. That information is retained on the OTM server.

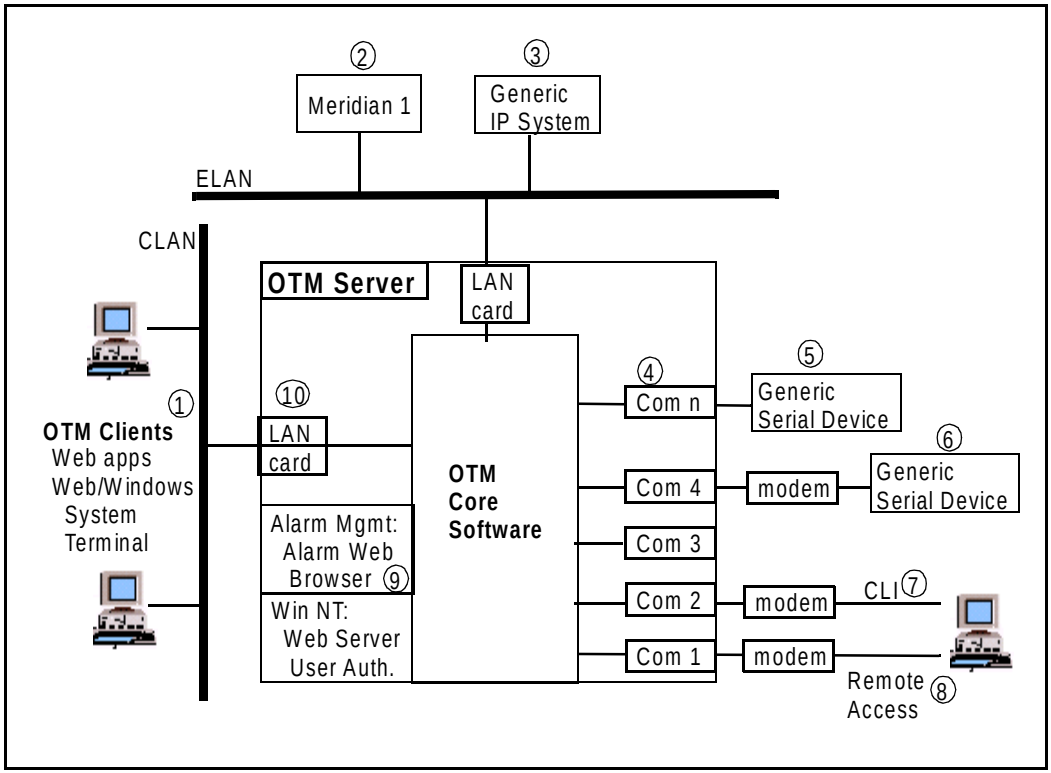
If you are not using Access Server, uncheck the "Launch Automatically" check box. This allows the server COM port to be used by another application, if needed.

CAUTION

For security reasons it is recommended strongly that you configure RAS to allow the incoming call to Access the Computer Only. This setting allows access to the RAS server, but not to the rest of your network.

Figure 4 shows the various ways you can use OTM to connect to network devices and systems, such as the Meridian 1. The figure legend, which follows the figure, describes these connections in more detail.

Figure 4
OTM Connectivity



.

Figure 4 Legend

1 OTM users can access a system via the OTM Windows and Web Navigators. Applications include System Terminal as well as any Web-based applications supported by the system. OTM clients on the CLAN/ELAN can also use the OTM Windows based applications (Station Administration, ESN, etc.).

2 OTM provides the connectivity to the M1 for all windows and Web-based applications.

3 Generic IP System connection - the Web-based System Terminal provides a telnet type connection to any IP connected system or device. You can also navigate to the device's management Web pages (if applicable). Example: MIRAN II cards provide both a telnet access and Web-based management applications.

4 Com Ports - the OTM server can be equipped with a Multiple Serial card to provide up to 8 additional com ports. These ports can be used for dial in or dial out.

5 Generic System direct serial connection - allows direct connection to any serial device. For example, for legacy Meridian 1 systems (R21 and earlier), you can connect to a maintenance TTY port and capture the M1 error messages. A new OTM Text Handler capability can filter the TTY output and generate SNMP traps for selected error messages.

6 Generic System remote serial connection - when connecting to a remote serial system you select the com port and manually dial the number of the desired system.

7 Access Server - provides a serial command line interface (CLI) into the OTM Server, enabling remote access. Once connected, you can change Windows NT passwords or connect to any system or devices defined and enabled in the Virtual Terminal Service. The CLI is launched at Server Startup, and opens a status window displaying different status messages. The CLI Configuration window allows you to configure the server COM port settings. A real-time Log file details all CLI activities. For more details, please see "Access Server" on page 119.

8 Remote Access - You can dial in to the OTM Server, log in using the Windows NT Remote Access Service (RAS) and access all defined systems, such as Web System Terminal or system specific Web applications. In addition, you can use the PC Anywhere application to dial into an OTM client PC on the CLAN/ELAN.

9 Web Alarm Browser - displays alarms collected from multiple supported Meridian 1 systems and devices.

10 PC LAN cards - provide access to both the CLAN and ELAN.

Alarm Management

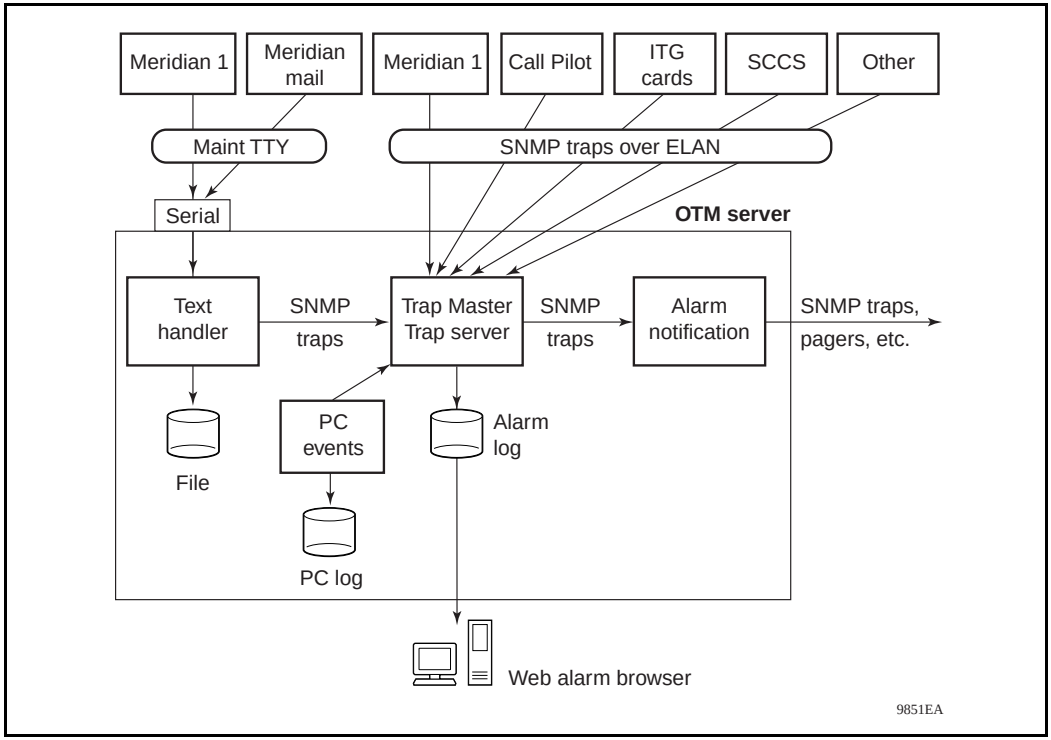
OTM Alarm Management provides an alarm collection and processing center for multiple systems and devices. OTM receives SNMP traps from systems, such as the Meridian 1 and Call Pilot, and stores them in a circular log file on the OTM Server. The OTM Alarm Notification application monitors the incoming traps and notifies the appropriate people of important events and alarms.

OTM Alarm Management has the following components:

- A Web-based Alarm Browser - used for viewing alarms from multiple systems and devices. HTML help is provided for individual alarms.
- A Windows based Alarm Browser - used for viewing Meridian 1 specific alarms. Windows help is provided for individual alarms.
- An Alarm Notification application - provides a scripting language to generate notifications on selected incoming traps. Notification types include pagers, email, and the forwarding of SNMP traps to an upstream processor (such as Optivity NMS). Notification is triggered by trap data such as alarm severity, device type, and time of day. A Script Wizard application simplifies the creation of Alarm Notification scripts.
- Text Handler application - parses maintenance TTY output and generates traps on selected error messages. This is intended primarily for legacy Meridian 1 systems (Release 21 and earlier) and Meridian Mail systems which cannot generate traps. Text Handler rules can be created by the user to support other serial devices.
- PC Event Log and Viewer for viewing events and alarms generated on the OTM Server and all of its Windows clients. This Windows application can also generate SNMP traps based on the event severity level.

Figure 5 shows the main components of OTM Alarm Management. The Trap Master is responsible for handling the SNMP Traps from the systems and storing it on the server for retrieval by the Alarm Browser client. The Trap Server distribute traps to applications registered to receive traps such as Alarm Notification.

Figure 5
OTM Alarm Management block diagram

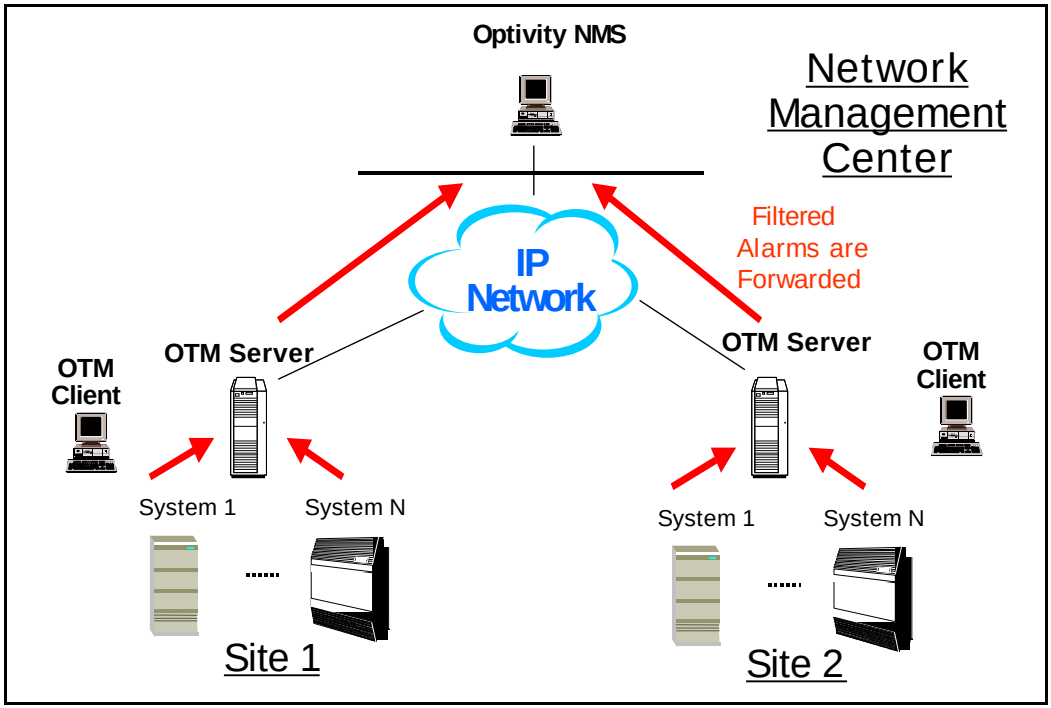


The Trap Master and Trap Server are run as a Windows NT Services on the OTM Server.

OTM integrates with Optivity Campus 9.0.1 and Optivity NMS 9.0.1. The devices represented in Optivity are OTM servers that are managing individual Meridian voice elements. These are manually added by the Optivity administrator. See Figure 6.

For a list of supported devices and additional information on alarm management, see the *Optivity Telephony Manager Alarm Management User Guide*.

Figure 6
Centralized Alarms



Access Server option

The Access Server capability is available as an orderable option within an OTM server. This functionality allows CLI access to an OTM Server using either a serial port directly or a modem. From the OTM Server connectivity is available to configured devices using the connection capability within Virtual Terminal Server functionality. This connectivity must be pre-configured within Virtual Terminal Server to be available to a CLI connection.

Typically this would be installed on an on-site PC that is used like a terminal server to allow a single connection to the site and then to fan out this connectivity to multiple devices that are connected to the OTM Server. Access from the remote location can be either via a human interactive session (via a terminal session), or by a remote machine communicating via scripts.

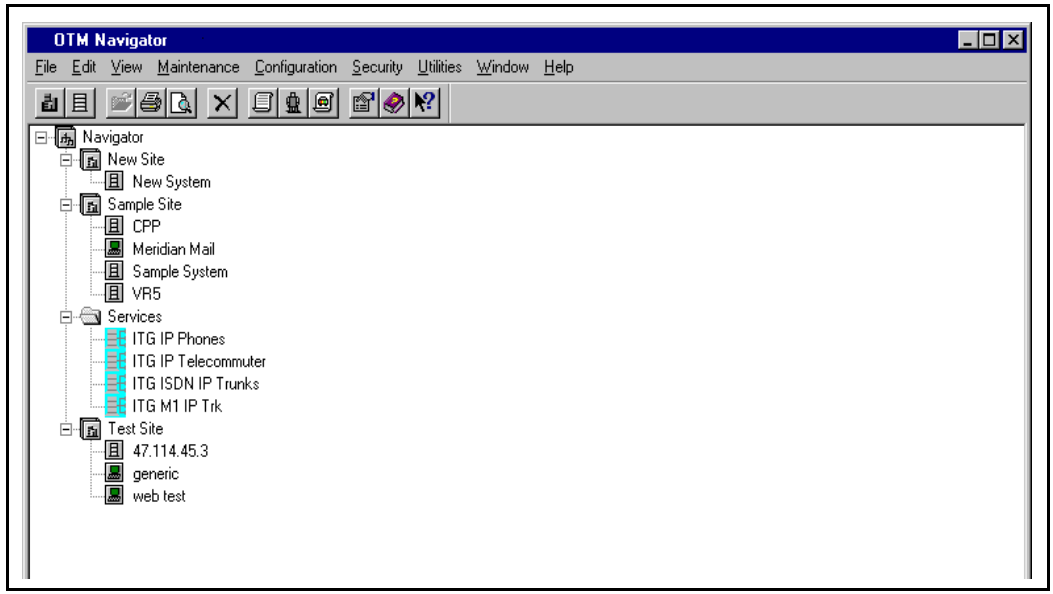
OTM Access Server is an option that can be used with any level of OTM package (General, Enhanced, or Premium). This CLI input capability is added by ordering the “Access Server” to add to the OTM server. In fact, if Access Server is ordered, it is not necessary to order any Set Expansion Packages, if all that is required is to use the Access server mode. Of course if OTM management functionality, such as Station Administration, is required, then it will be necessary to order the Set Expansion Packages.

OTM Windows Navigator

OTM Windows Navigator and OTM Web Navigator are the two main graphical user interfaces (GUIs) to OTM. These two GUIs provide access to most of the OTM systems and services.

OTM Windows Navigator, which uses the Microsoft Windows interface, shows the names and types of all systems available to the current user, and allows you to group the systems into sites for more convenient access. An example of the OTM Windows Navigator is shown in Figure 7.

Figure 7
OTM Windows Navigator window



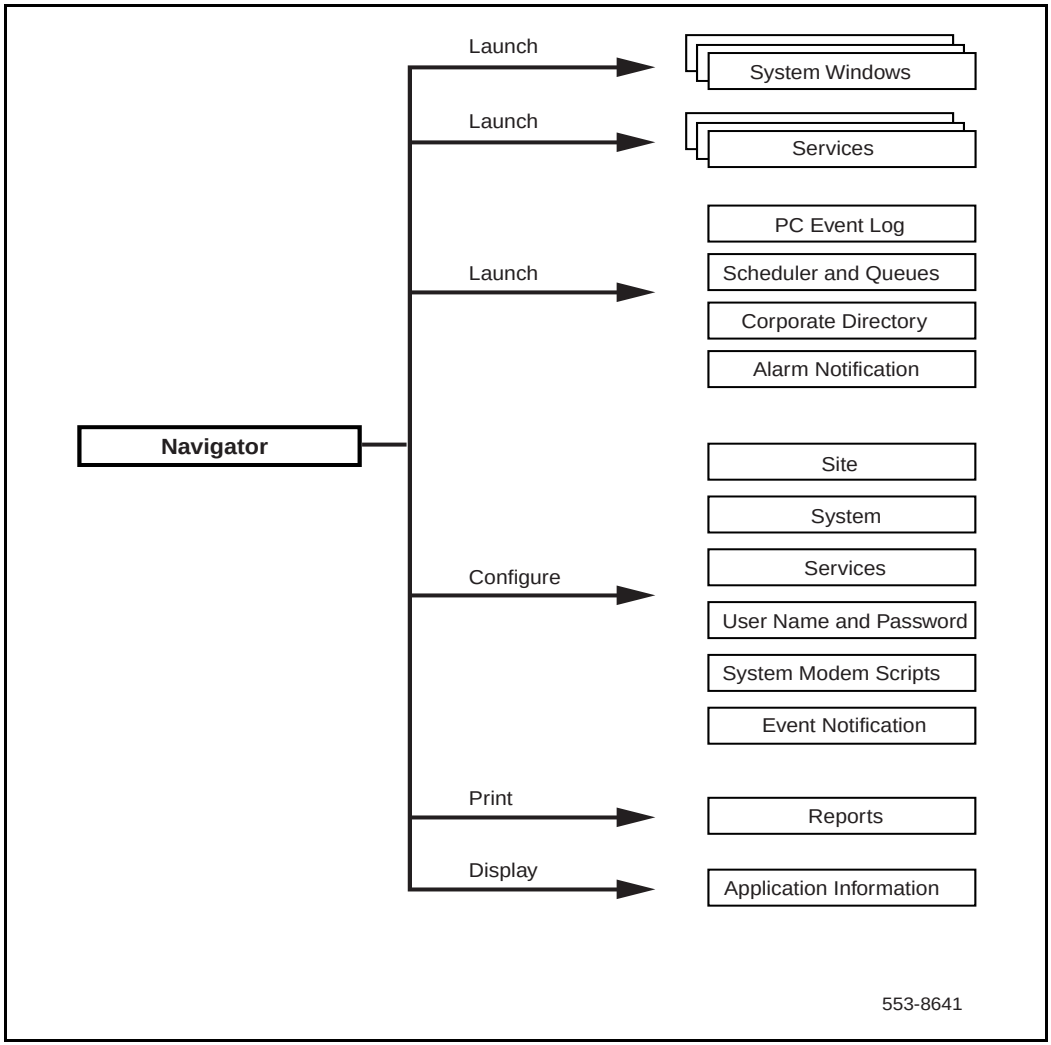
OTM Web Navigator, which uses the Web (http) interface, provides access to OTM's Web-based features and services. For more information about the OTM Web Navigator and the features and services to which it provides access, see "OTM Web Navigator" on page 210.

OTM Windows Navigator provides the following functions:

- Displays a "tree" structure for Sites and Systems on the network managed by the current user. Access systems at a site by opening that site.
- Allows you to launch the System Window.
- Allows you to configure and administer OTM data: Sites and Systems, Users.
- Allows you to configure and administer OTM Services, such as Integrated Telephony Gateway.
- Allows you to launch utility applications such as the Scheduler, Corporate Directory, and Alarm Notification.
- Allows you to display the licensing and release information for all installed OTM applications.
- Allows you to print reports.

Figure 8 illustrates these functions.

Figure 8
OTM Windows Navigator functions



Using OTM Windows Navigator

OTM Windows Navigator allows you to access any Meridian 1 system or other systems that your user ID privileges allow you to. In OTM Navigator, you open the site of interest to choose a system on which to work. Double-click a system to open its System window and launch any of the OTM applications to work on that system.

Open a site by double-clicking its name or clicking the "+" symbol next to the site. The "+" changes to a "-" when the site opens. An open site displays all systems at that site. Close a site by clicking the "-" symbol.

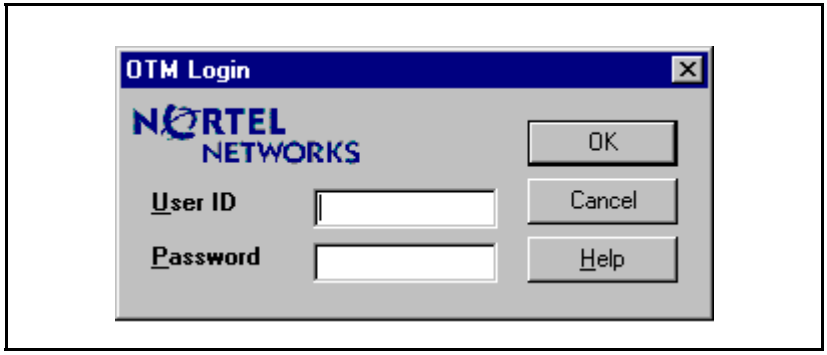
For Meridian 1 systems, the components that make up the system appear in the system window. OTM displays a terminal emulation window for systems defined as "Other."

For information about using the OTM Web Navigator, see "OTM Web Navigator" on page 210.

Logging in and launching OTM Windows Navigator

In the Start menu, under Programs, select **OTM**. The login dialog appears. as shown in Figure 9. Enter your User ID and password. The OTM Windows Navigator window appears, as shown in Figure 10.

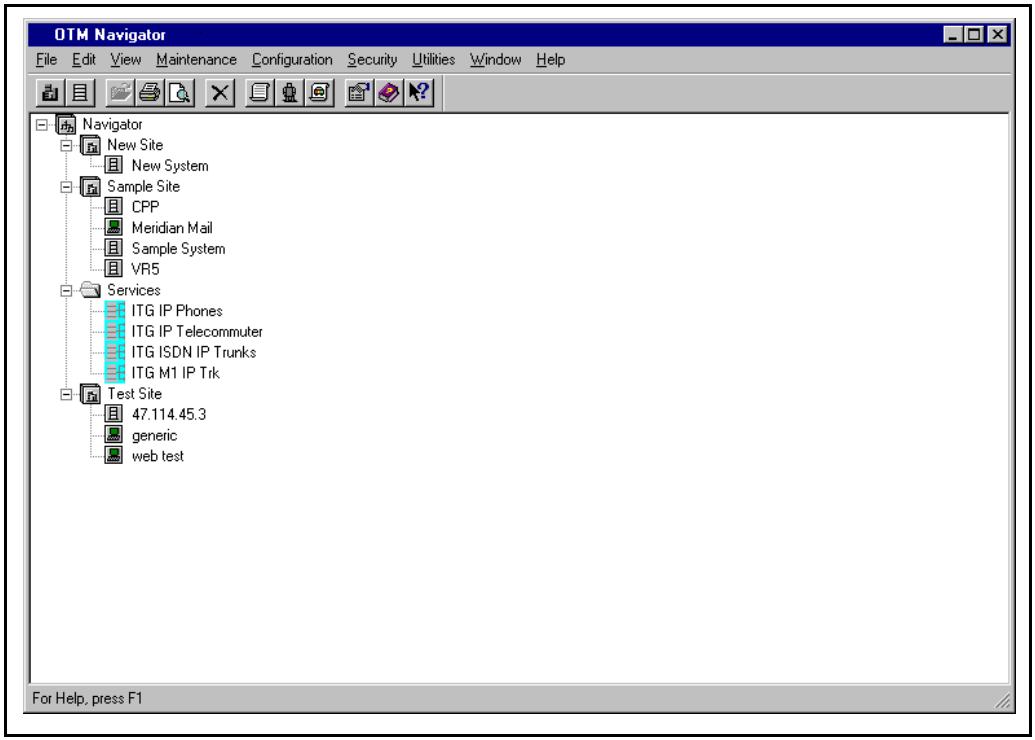
Figure 9
Login dialog box



OTM Navigator menus

Detailed descriptions of the functions of each command in the Navigator menus are available by clicking the context-sensitive Help button in the toolbar.

Figure 10
OTM Navigator window



Services Folder

The services folder contains applications and services available for sites and systems defined and accessible by the OTM PC.

IP Telephony Gateway Applications

The following OTM applications provide configuration and maintenance for the ITG card.

- ITG M1 IP Trunks
  This application configures and maintains the 8-port ITG (trunk) card that resides in the IPE shelf of a Meridian (M1) system. The card has a 10/100 baseT connection to carry pocket-sized voice and fax calls over IP data networks, and can serve as a toll bypass to the traditional PSTN. For more information refer to *Meridian Internet Telephony Gateway (ITG) Trunk 1.0/Basic Per-Trunk Signaling* (553-3001-116).
- ITG ISDN IP Trunks
  This application configures and maintains the 24-port ITG (trunk) card that resides in the IPE shelf of the Meridian 1 (M1). The card appears to the switch as a 24-port trunk card with ISDN Signaling Link (ISL) and D-channel signaling. The card has a 10/100 baseT connection to carry packetized voice and fax calls over IP data networks. For more information refer to *Meridian Internet Telephony Gateway (ITG) Trunk 2.0/ISDN Signaling Link (ISL)* (553-3001-202).
- ITG M1 IP Lines
  This application provides the configuration and maintenance of the ITG line card for IP Telecommuter. This application configures the IP Line gateway and the gatekeeper, but not the H.323 IP terminal or PC-based software client. For more information refer to *Meridian Internet Telephony Gateway (ITG) Line 1.0/IP Telecommuter* (553-3001-119).
- ITG IP Phones
  This application provides the configuration and maintenance of the ITG gateway card for the Meridian Internet Telephone, also referred to as the i2004 set. The i2004 set is a true Internet telephone when connected to a Meridian 1 through an IPE-to-ITG gateway card. The configuration of i2004 is through the Station Admin application in OTM. For more information refer to *Meridian Internet Telephony Gateway (ITG) Line 2.0/i2004 Internet Telephone* (553-3001-204).

Toolbar

The OTM Navigator toolbar includes several buttons that act as shortcuts to the commands available in the menus. The function of each button in the toolbar appears when you move the mouse over the button. See Figure 11.

Figure 11
Navigator Toolbar

Status Bar

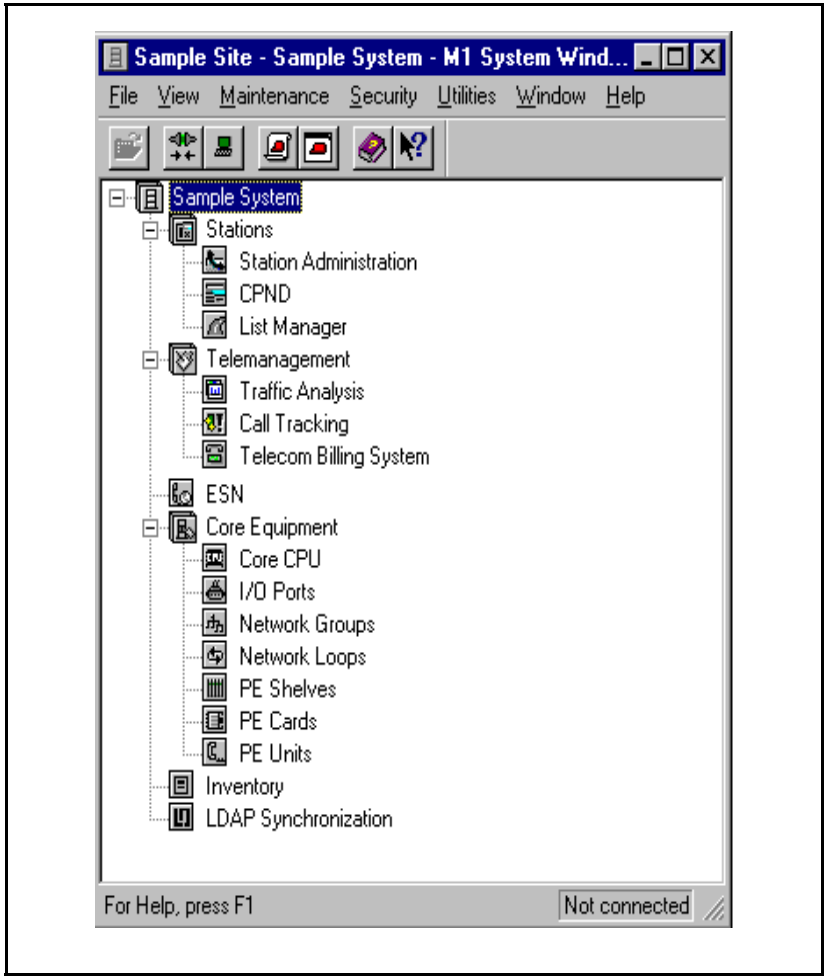
A Status Bar is located at the bottom of the window. To display or hide the Status Bar, use the **Status Bar** command in the View menu.

The Status Bar describes actions of the menu commands as you use the mouse to navigate through menus. It also describes the actions of the Toolbar buttons as you press them. When you choose a menu command, the Status Bar describes the progress of the command while it executes. For example, the Status Bar shows **Printing text** when you choose **Print** from the File menu.

Working with the OTM System Window

From OTM Navigator, double-click the system on which you wish to work and the System window for that system appears. See Figure 12.

Figure 12
System window



OTM System window allows you to launch the following applications (some of these applications are purchased separately):

- Alarm Banner
- Events
- System Terminal (Ethernet or PPP)
- System Terminal VT220 (serial)
- Station Administration
- Traffic Analysis
- Telecom Billing System
- Call Tracking
- ESN Analysis and Reporting Tool
- Maintenance Windows
- Inventory
- LDAP Synchronization

OTM System Window menus

Detailed descriptions about the functions of each command in the OTM System window menus are available by clicking the “Context-sensitive Help” button in the toolbar.

Configuring Sites, Systems, and User accounts

This chapter provides instructions for changing the default login password and defining your own OTM sites, systems, and user accounts. Only OTM administrators have authorization to perform these tasks.

CAUTION

To ensure security, you *must* change the default password. Follow the steps in this procedure to select a new password.

Changing the default login password

The default login password (**Admin**) should be changed immediately after OTM is installed to ensure security. Follow these steps if you have not changed the password.

1 If OTM is not already running, follow these steps to start OTM and login using the default login password:

- Choose **OTM Navigator** from the Programs list in the **Start** menu.

The OTM login dialog box appears.

- Enter the default system administrator user ID and password. For security purposes, the password does not appear as you type it in the Password field.

  User ID: **Admin**

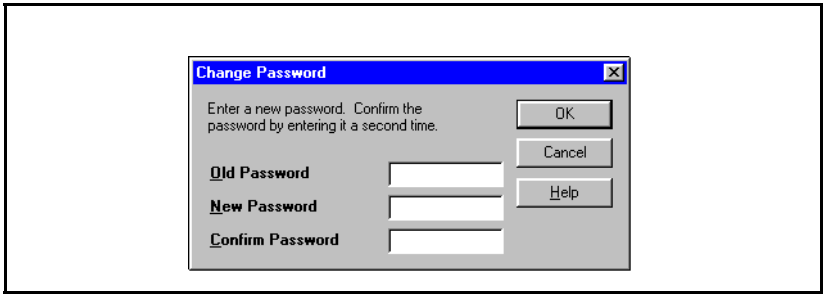
  Password: **Admin**

- Click **OK**.

After OTM accepts your ID and password, the OTM Navigator window opens.

2 In the Navigator window, choose **Change Password** from the **Security** menu to open the Change Password dialog box.

Figure 13
Change Password dialog



3 Enter the old password in the Old Password field.

4 Type a new password in the New Password field.

5 Retype the new password in the Confirm Password field.

6 Click **OK**.

7 A message box informs you that the password was successfully changed. Click **OK**.

OTM will require the new password the next time you log on.

Site and system administration

The system administrator defines the sites and systems that appear in the Navigator window. Sites and systems must be defined before users can connect to a system and perform maintenance tasks. A site typically represents a physical location containing one or more systems. Systems are defined as Meridian 1 or Other (non-Meridian 1). Other provides access through VT220 Terminal Emulation such as Meridian Mail. Additional system types such as Meridian Passport and MSL-100 are examples of additional systems that can be added (refer to the appropriate user guides for more information). The Navigator **Configuration** menu allows the system administrator to add, change, and delete sites and systems.

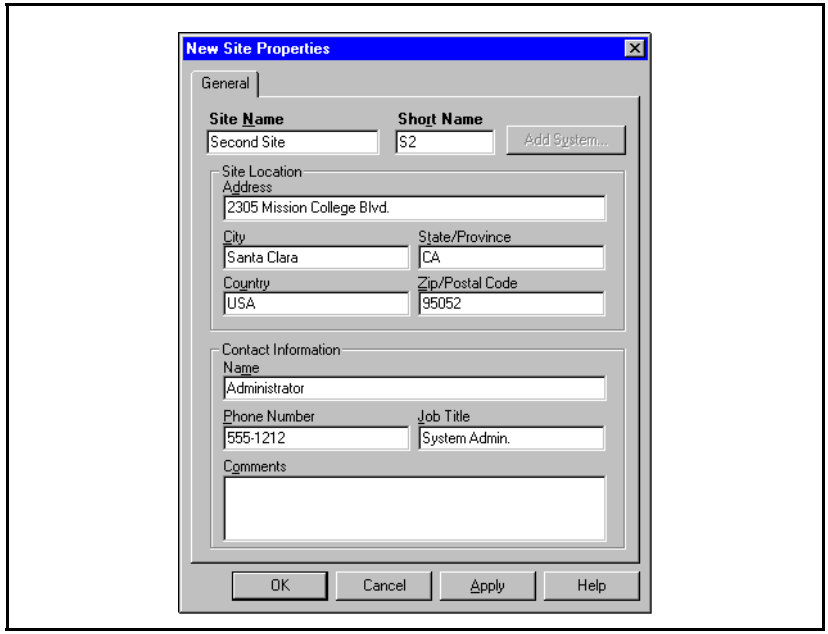
Note: For more information about the Navigator and System windows, see "OTM Windows Navigator" on page 51.

Adding a site

You can add any number of sites to the Navigator window.

1 In the Navigator window, choose **Add Site** from the **Configuration** menu. The Site Properties window appears (Figure 14).

Figure 14
New Site Properties sheet



2 Fill in the Site Name and Short Name fields (these are required fields).

The **Site Name** appears in the Navigator tree. The Short Name is an abbreviated site name that displays in the Alarm Banner.

3 In the Site Location box, fill in the site address information.

4 In the Contact Information box, fill in the contact name and related information. Click **Apply**.

5 To add a new system to this site:

— Click **Add System**.

— Follow the instructions for “Adding a system” on page 64.

6 When you have finished entering Site information, click one of the following buttons to add the site to the Navigator tree:

— **OK** adds the site and closes the property sheet

— **Apply** adds the site and leaves the property sheet open allowing you to add another system to this site (you may repeat step 5 to add another system)

— **Cancel** closes the dialog box without adding the site.

Adding a system

You can add as many systems (including non-Meridian 1 systems) to a site as your license permits. You must have administrator privileges to add a system.

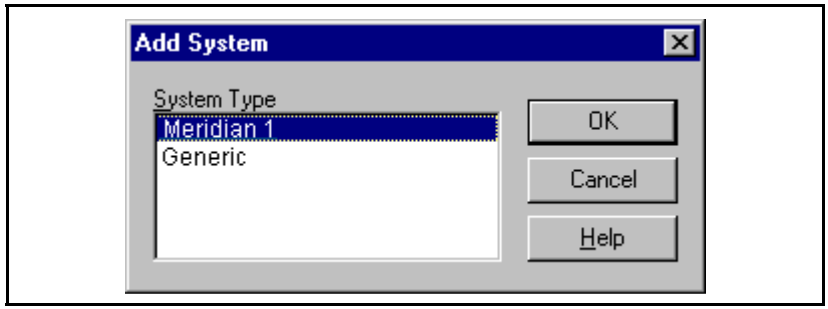
1 In the Navigator window, select the desired site.

Note: If you are adding a new system from within the New Site Properties window, skip to step 3 in this procedure.

2 Choose **Add System** from the **Configuration** menu or the right mouse button pop-up menu.

3 In the Add System dialog box, select the type of system you want to add. Then click **OK**.

Figure 15
Add System dialog box



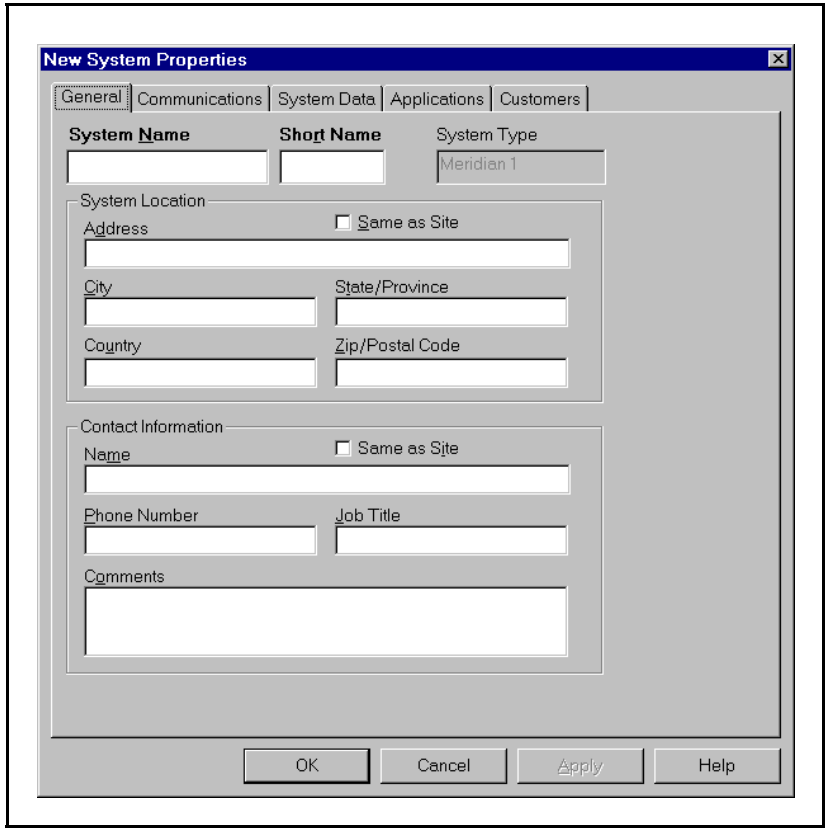
Note: You may need to install additional software to enable other system types not listed here. Follow the installation instructions included with your order.

4 Click the **System Properties—General tab** (Figure 16) enter the System Name and **Short Name** (required fields) and other information as needed. Click **Apply**.

You can make system location and contact information the same as site information by clicking the Same as Site checkbox.

Note: Bolded fields indicate required information. To change a value, edit the field. Some fields may have a list of predefined choices. An arrow within a field indicates a drop-down list of choices. Press the arrow to select from the list. For more detailed information, refer to the online help.

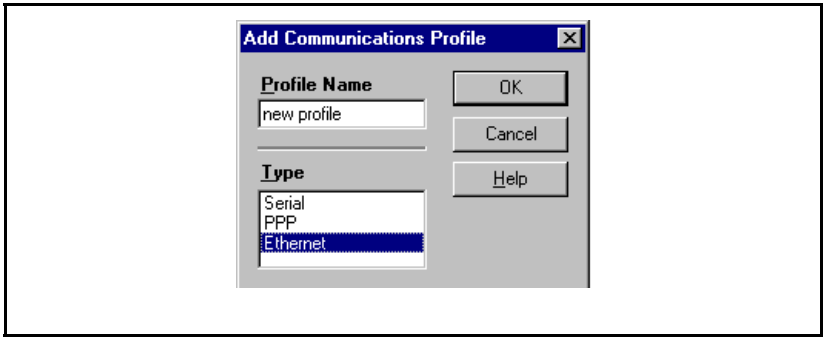
Figure 16
System Properties—General tab



5 To add a new communications profile click the **System Properties—Communications** tab. This tab defines the types of communications profiles that may be applied to system applications (one profile may be used for multiple applications).

Click **Add**. The Add Communications Profile dialog box appears. See Figure 17.

Figure 17
Add Communications Profile dialog box

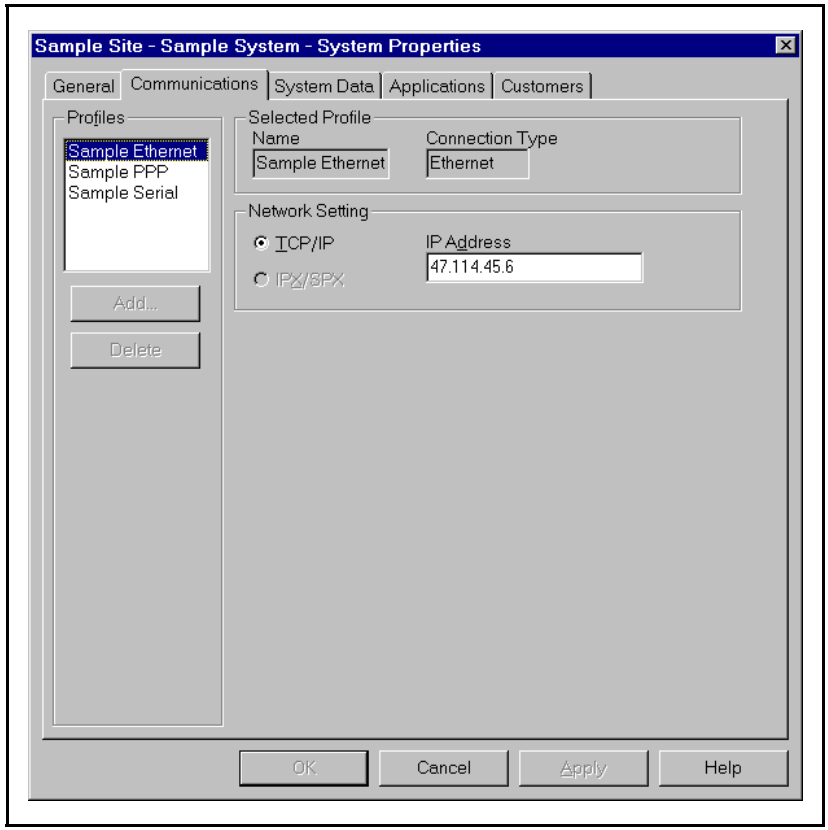


Select a communications type from the Type box and enter a Profile Name, then click **OK** to go back to the Communications tab. See Figure 18.

Fill in the communications information for the new profile:

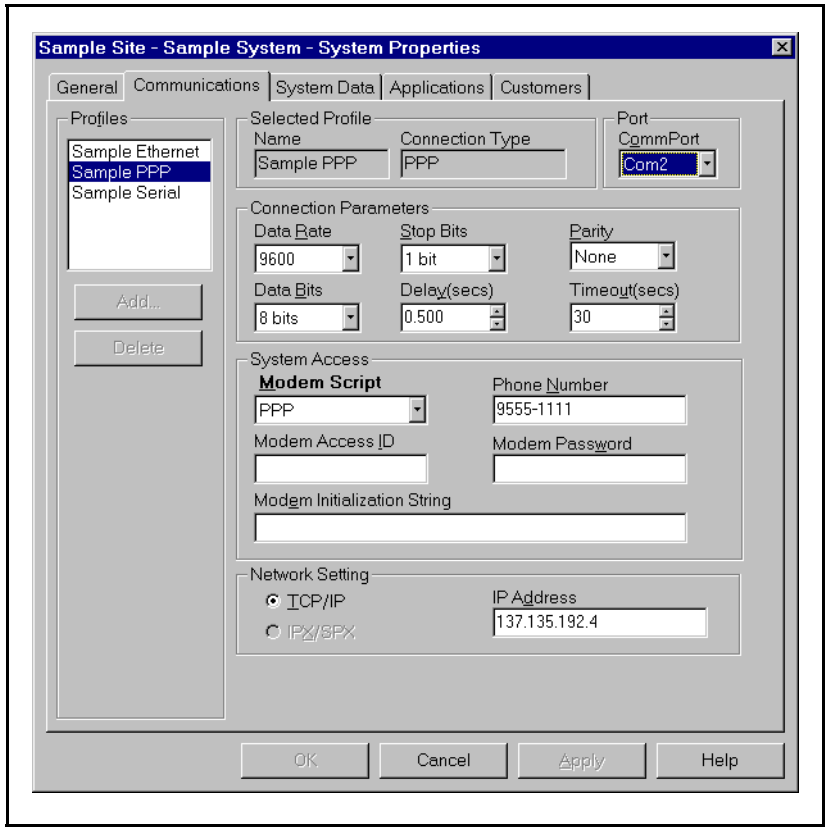
For Ethernet: Select the appropriate network protocol. Enter the IP address that you configured on the Meridian 1. Click **Apply**.

Figure 18
System Properties—Communications tab—Ethernet Profile



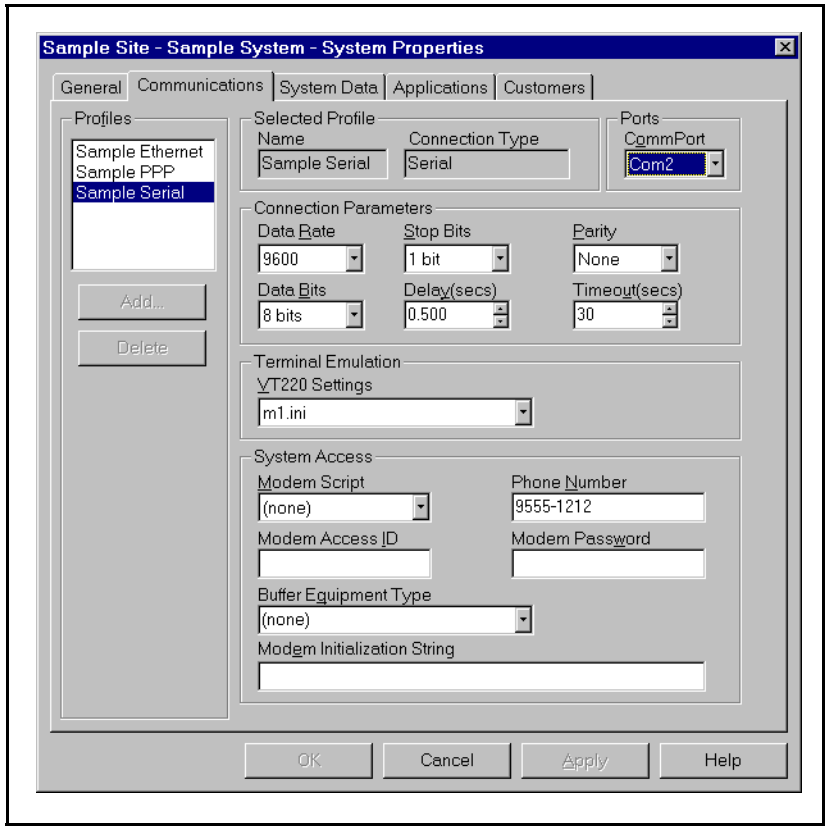
For PPP: Enter all modem parameters and dialup information. Select PPP in the Modem Script text box. Set the IP address to the local IP address, as configured on the Meridian 1. Click **Apply**.

Figure 19
System Properties—Communications tab—PPP Profile



For Serial: Enter all modem parameters and dialup information. Select the appropriate value in the Modem Script drop-down box. This will usually be "None" unless a specific value is defined for your system. Click **Apply**.

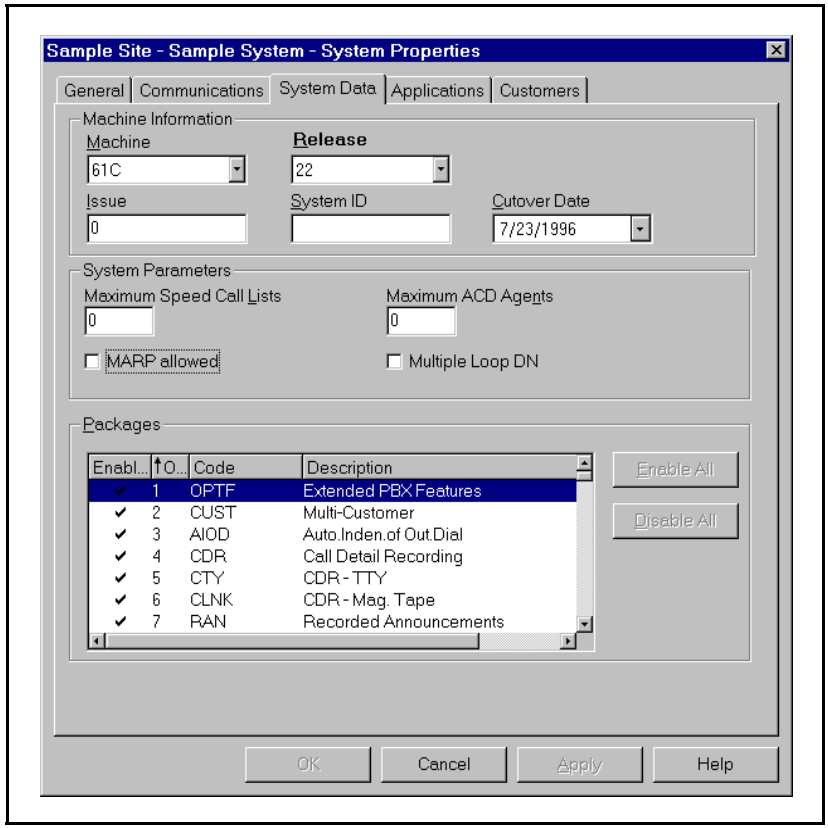
Figure 20
System Properties—Communications tab—Serial Profile



6 Click the **System Properties—System Data** tab (Figure 21). Enter the machine/system type and release version for the system and enable or disable M1 packages. For example, if your machine type is the Option 61C, enter **61C** in the Machine field and enter **1** in the Release field.

Note: You can copy this data directly from an installed switch by scheduling an upload with the **File** menu **Update System Data** command in the System window. Update System Data uses the communication profile for Station Administration. However, you should configure the Release number here first to allow available applications to show up properly in the Applications Tab.

Figure 21
System Properties—System Data tab



7 Click the **System Properties— Applications** tab (Figure 22).

This tab defines the OTM applications that will appear in the System window and the communications profile to be used with each application. *You must enable an application for it to be available in the System window.*

To enable an application:

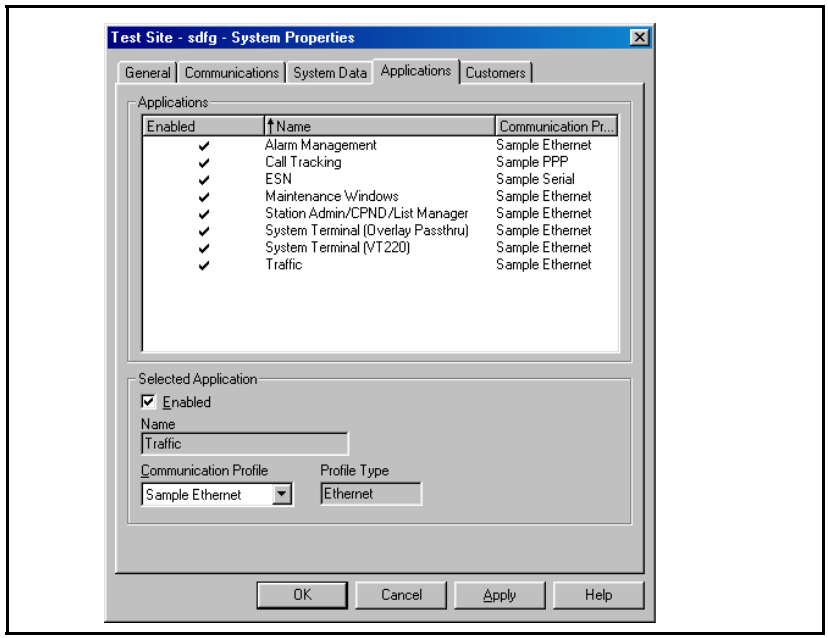
- Select the application in the Applications box.
- Select a Communications Profile from the drop-down list in the Selected Application box.

A checkmark appears next to the application and the Enabled box is also checked.

To disable an application:

- Select the application in the Applications box.
- In the Selected Application box, click the **Enabled** checkbox to remove the checkmark.

Figure 22
System Properties—Applications tab

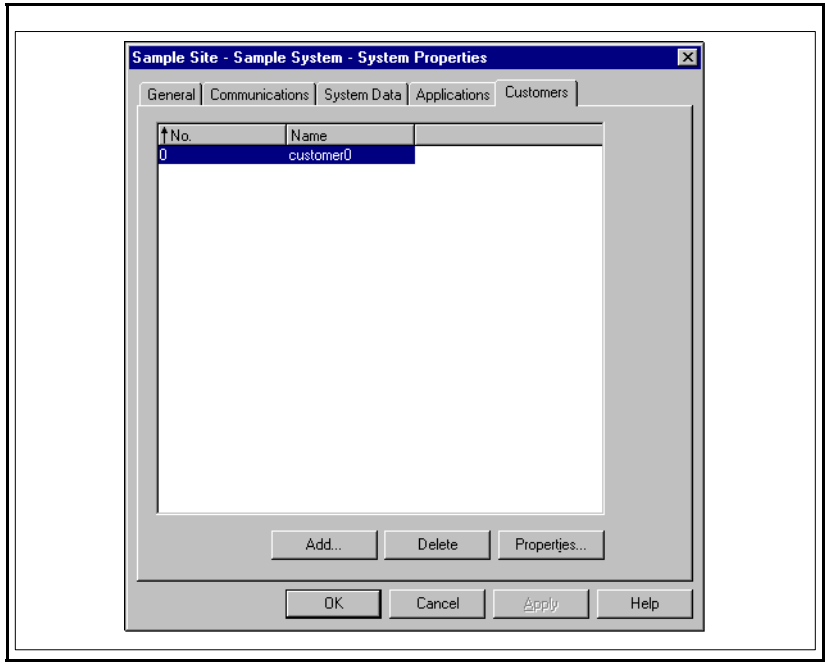


8 Click the **System Properties—Customers** tab (Figure 23).

This tab lists the customers currently defined for this Meridian 1 system. You may add new customers, delete customers, or review the properties of a selected customer. When you add a new customer, you configure the Meridian 1 features and numbering plans that are available to the customer. This information is not automatically updated on the Meridian 1 and must be updated by using the LD15 customer overlay, the overlay interface which allows customers to configure their systems on the M1 switch. For more information on overlay interfaces, see the System online Help.

Note: Customer information is required for System Administration/CPND and ESN applications.

Figure 23
System Properties—Customers tab



9 To add a customer:

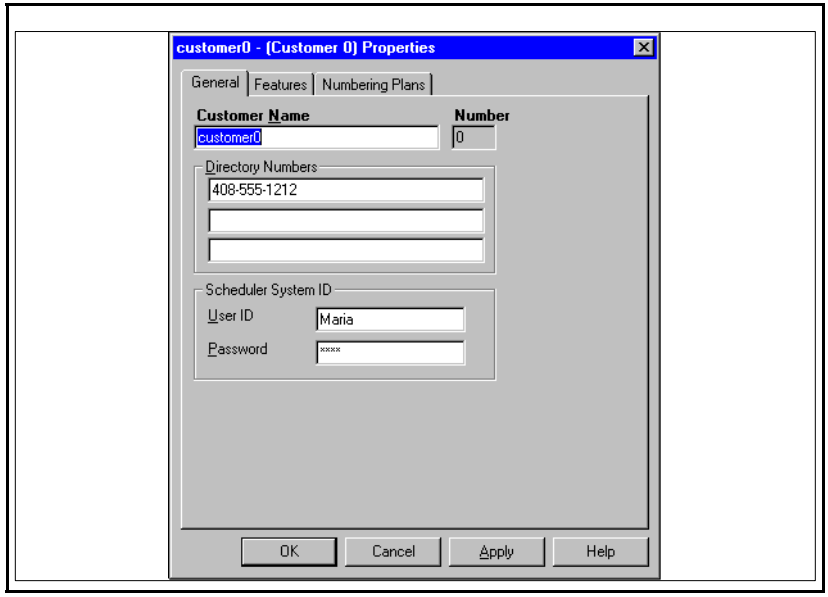
— Click **Add** in the **System Properties—Customers** tab.

— Select a Customer number. Click **OK**.

— Select the **General** tab, in the Customer Property sheet (Figure 24) and fill in the customer information.

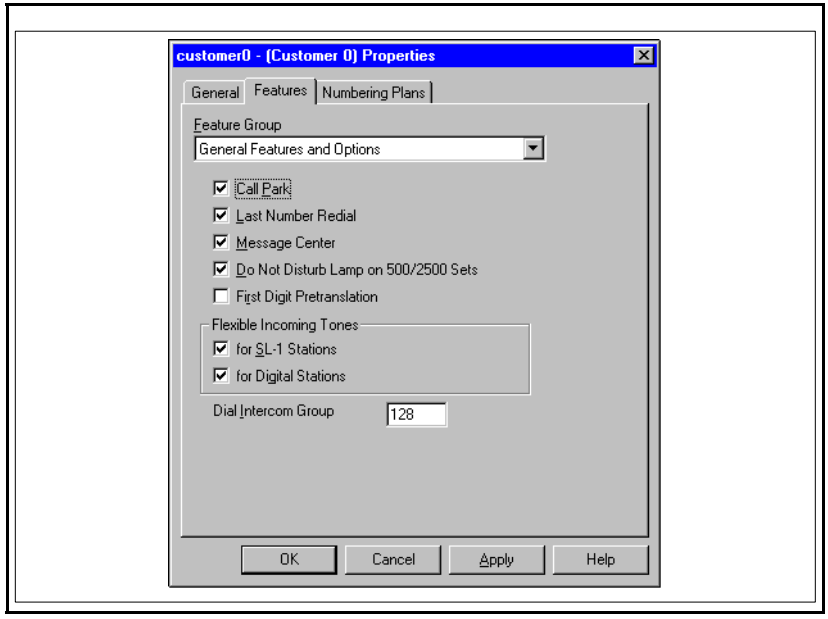
Note: Enter User information in the Scheduler System ID text box if you are using applications with scheduled activities, such as Station Administration/CPND, ESN, Traffic, and Call Accounting.

Figure 24
Customer property sheet, General tab



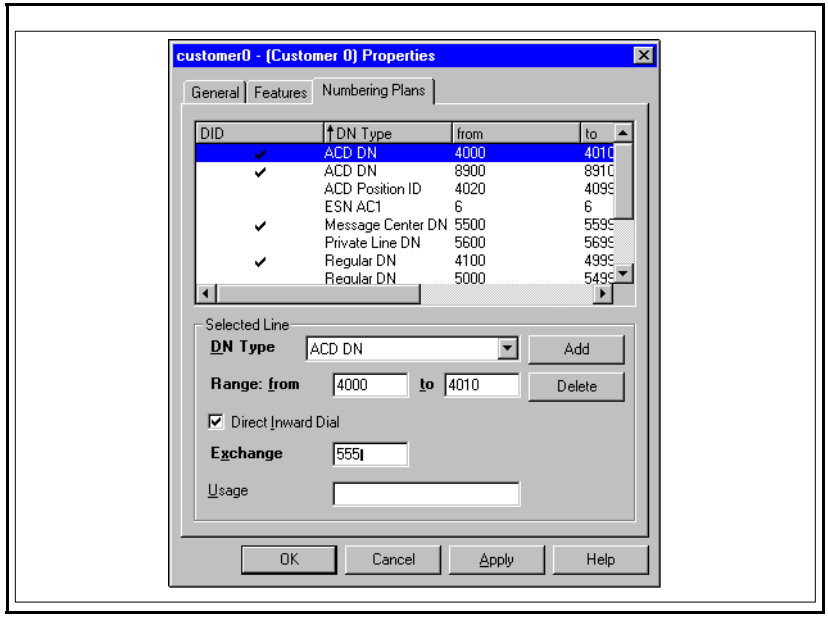
- Select the **Features** tab (Figure 25), and fill in the customer information.

Figure 25
Customer property sheet, Features tab



- Select the **Numbering Plans** tab (Figure 26), and fill in the customer information.

Figure 26
Customer property sheet, Numbering Plans tab



10 When you have finished entering customer information, click one of the following buttons to save the information:

— **OK** to add the customer and return to the System properties sheet.

— **Apply** to add the customer and leave the Customer properties open so that you may add other information for this customer.

— **Cancel** closes the dialog box without adding the customer.

11 To delete a customer, click **Delete** in the **System Properties—Customers** tab. A delete confirmation box opens. Click **OK**.

12 To modify customer information, click **Properties** in the **System Properties—Customers** tab. The Customer property sheet opens. Modify information in the appropriate tabs and click **OK**.

13 In the System properties sheet, click one of the following buttons:

- **Apply** adds the system and leaves the dialog box open.
- **OK** adds the system and closes the dialog box.
- **Cancel** closes the dialog box without adding the system.
- **Help** provides online help.

The new system is added to the tree under the selected site.

Changing site information

You can change any information about a site, including the site name, address, and contact. You must have administrator privileges to change site information.

1 In the Navigator window, select the desired site.

2 Choose **Properties** from the **File** menu or the right mouse button pop-up menu. The Site Properties dialog box opens to the **General** tab.

3 Bolded fields indicate required information. To change a value, edit the field. Consult the online help for details on any field.

4 To add a new system to this site, click **Add System**, and fill in information for the new system. See “Adding a system” on page 64.

5 Click one of the following buttons:

- **Apply** saves the information and leaves the dialog box open.
- **OK** saves the information and closes the dialog box.
- **Cancel** closes the dialog box without saving.
- **Help** provides online help.

Changing system information

You can change any information about a system or its communications connection. You must have Administrator privileges to change any system information.

1. In the Navigator window, select the desired system.
2. Choose **Properties** from the **File** menu or the right mouse button pop-up menu.

   The System Properties window opens.
3. Select the tab containing the information you wish to change.

   Bolded fields indicate required information. To change a value, edit the field or select a different item from a field popup menu. An arrow within a field indicates a drop-down list of choices. Press the arrow to select from the list. Consult the online help for details on any field.
4. Click one of the following buttons:
   - **Apply** saves the information and leaves the dialog box open.
   - **OK** saves the information and closes the dialog box.
   - **Cancel** closes the dialog box without saving.
   - **Help** provides online help.

Deleting a site or system

You must have administrator privileges to delete a site or system from the Navigator window. A record of the deletion is stored in the PC event file.

WARNING: Deleting a site also deletes all of its systems.

1. In the Navigator window, select the site or system.

   To delete all sites and systems, select the Sites icon at the top of the tree.
2. Choose **Delete** from the **Edit** menu.
3. Click **OK** to confirm.

Changing your password

You can change your password at any time. If your password has expired, OTM prompts you to enter a new password when you attempt to log on. Refer to “Changing the default login password” on page 61.

Configuring OTM Windows users

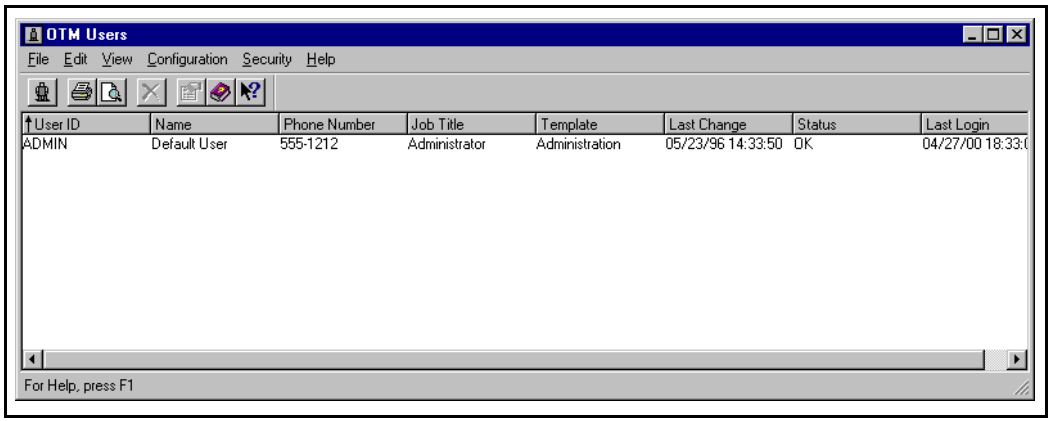
OTM allows you to create User Templates to speed the process of adding users accessing the OTM Windows Navigator. A template is a form that you fill in to define most aspects of a certain kind of user, such as their level of access to sites and systems and automatic connection to particular systems. You can create as many user templates as you need. You will assign a template to individual users when you add users to the OTM database.

> ***Note:*** Access to the OTM Web Services is provided through Windows NT. Refer to See "OTM Web Services" on page 209.

Creating a user template

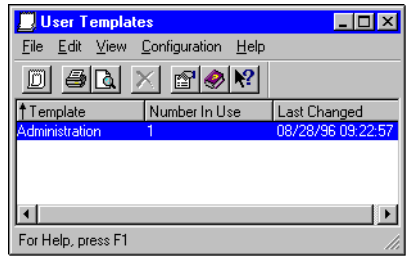
1 In the Navigator window, choose **OTM Users** from the **Security** menu to display the OTM Users window (Figure 27).

Figure 27
OTM Users window



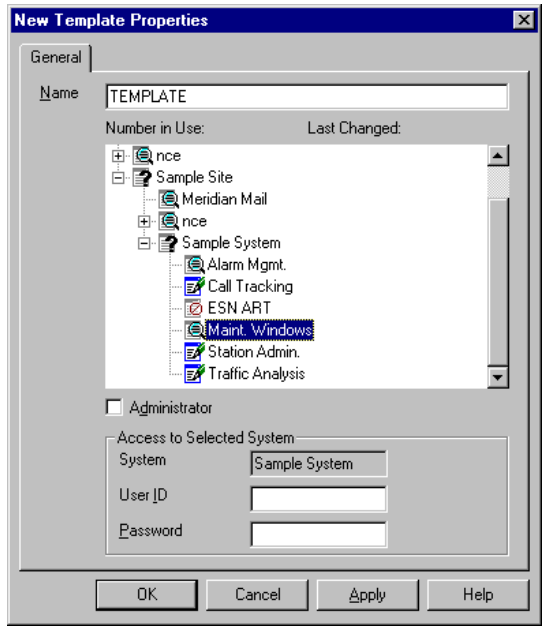
2 Choose **User Templates** from the **Configuration** menu. The User Templates window appears (Figure 28).

Figure 28
User Templates window



3 Choose **Add Template** from the **Configuration** menu. The New Template property sheet appears (Figure 29).

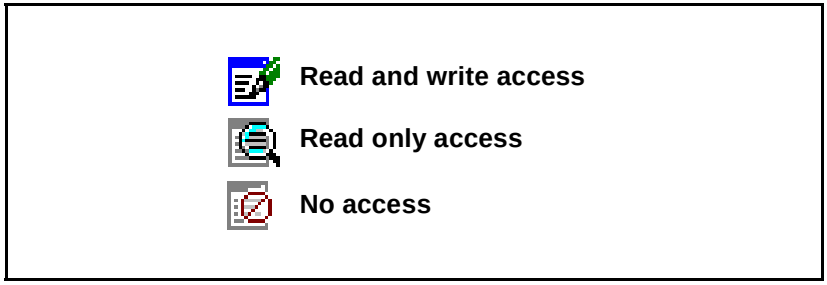
Figure 29
New Template property sheet



4 Enter a name for this class of user.

For each site, system, and application in the tree, use the right mouse button to assign user privileges (Read-write, Read-only, or No Access). Each click of the left mouse button causes the access privileges and corresponding icon to change. See Figure 30. Select the Administrator box, if appropriate. The site and system icons change to reflect the access level.

Figure 30
Access privilege icons



Note: Access privileges defined for sites or systems at higher levels in the tree structure are applied to all subordinate items.

5 Enter values in the User ID and Password text boxes to allow this class of user to connect to this system without having to enter a User ID and Password each time you want to connect.

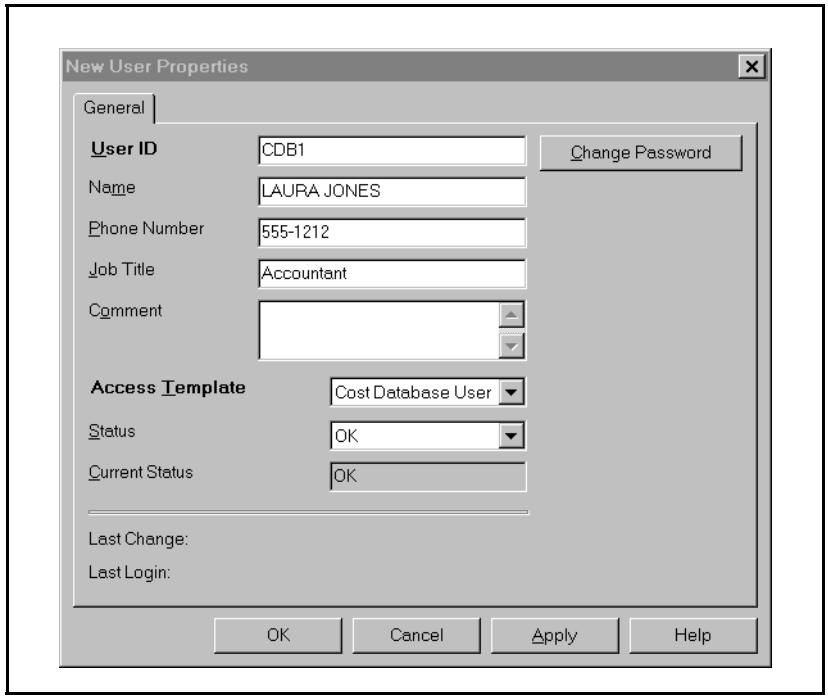
6 Click **OK**. Close the User Template window.

Adding a user

1 In the OTM Users window, choose **Add User** from the **Configuration** menu.

The New User property sheet appears (Figure 31).

Figure 31
New User property sheet



2 Enter a User ID, and from the Access Template drop-down list, select the template that you will use as the basis for this user definition.

3 Fill in other data as required. The window prompts you to enter a password and confirm it after clicking **OK** or **Apply**.

4 Click the **Change Password** button to change the OTM login password for this user only.

5 Click **OK**. The new user appears in the OTM User window. Close the OTM User window.

Deleting a user template

A user template can only be deleted when all associated users of that template are either deleted or re-assigned to another template.

Restricting user access permission levels

A user can be restricted from having access to sites, systems and applications. However, when a user is defined as being restricted from any access to all sites, systems and applications, i.e., the Navigator, the user will, in fact, be able to see all the sites and systems in the Navigator tree and have read-only access to their properties. If a restricted user tries to open a system they will see a System Window with no applications visible.

Sites and systems displayed in user templates

When adding or modifying a user template, only systems that have applications enabled are presented. If no applications are enabled for the systems within a given site, the site and system(s) will not appear in the Template Properties.

Maintenance Tasks

The following guidelines and tables indicate suggested scheduling of various OTM operating procedures.

Telecom Billing System

Please refer to “Chapter 3: Operating Procedures” of the *Telecom Billing System User’s Guide* for complete details of the schedules for data collection, database maintenance, and data management. The database maintenance schedules outlined in this chapter should also be used for OTM Corporate Directories.

Call Tracking

Table 3:
Call Tracking Maintenance Tasks

Maintenance Task	Schedule
Data collection (real time)	Continuously
Data collection (from a file)	Hourly
Review Alarm Log	No set schedule. review as needed
Backup and archive Call Tracking database	The main Call Tracking database is part of the site/system data files. This will be backed up/archived with the other databases.
Restore Call Tracking database	As necessary

Traffic Analysis

Table 4: Traffic Analysis Maintenance Tasks

Maintenance Task	Schedule
Data collection (through direct connection to Meridian 1)	Hourly
Data collection (through buffer or DBA)	Daily
Backup/Archive Traffic database	Archive the Traffic database monthly. Remember to purge old or unneeded data from the working directory during this Archive procedure
Restore Traffic database	As necessary

OTM Site/System Data

Table 5: OTM Site/ System Data Maintenance Tasks

Maintenance Task	Schedule
Backup Employee database	Weekly
Backup all other databases (OTM Corporate Directories) for site/system:	Monthly
Restore databases for site/system	As needed
Note: Since the Employee database is usually edited more frequently, you should back up the database on a weekly basis instead of on a monthly basis (as you would with the other OTM databases).	

Compact and Repair Utility

The Compact and Repair Utility is usually not run on a set schedule. This utility is used to help repair and compact MS Access database files in OTM that may be corrupted or have taken too much disk space. You should therefore run this utility at any time you have deleted or purged a large number of records from one of the system databases. For example, if you deleted a large number of call records from the Call Database, or if you made major edits to the Employee Database (especially deletions), then you should run the Compact and Repair utility databases. This will optimize your disk space an repair any possible flaws in these MS Access database files.

Scheduler

This chapter contains a general overview of the Scheduler. For more information about how to use the Scheduler windows, refer to the Scheduler online Help.

The Scheduler schedules an Optivity Telephony Manager activity (or any Windows application) for processing at a later date and time. With Scheduler, you can define the intervals you want to run the activity. If there are multiple tasks in a job, you can assign the tasks in a sequential order using the queue function.

The Scheduler normally runs in background mode. This means that if an OTM application is due to run at a certain time, the Scheduler automatically runs it at that time without interrupting current sessions.

> ***Note:*** The Scheduler must be running in the Windows environment at the time an event is to run. You can start the Scheduler application any time. An event and its tasks do not execute if the Scheduler is not running at the scheduled time.

Access the Scheduler

There are two ways to access the Scheduler:

- From the OTM Navigator click Scheduler on the Utilities menu and schedule the activity directly.
- From any supported application select the Schedule command where it appears in that application. For example, you can click **Schedule** in the Reporting dialog of the Telecom Billing System. You can use the Scheduler functions to enter the information to schedule this application.

Jobs and tasks

The Scheduler represents scheduled activities (such as, data collection, synchronization and reporting) as jobs and tasks.

What is a job?

A job contains the scheduling properties of an activity. This includes such information as the activity's: initial execution time; interval for additional executions; status; name; and queue assignments. The job also contains the actual task that identifies the activity's actions. That is, each task that runs that actual activity will be assigned to a job. This way, the task can be scheduled. Only jobs can be scheduled; individual tasks cannot be scheduled without a job.

What is a task?

A task contains the actual command used to invoke the activity from the OTM application. This includes such information as the activity's: command line (the code used to invoke the activity); its priority in the list of tasks (when it should be executed in relation to any other tasks in the list); and any dependencies associated with it (physical resources on your PC that are needed to execute the activity).

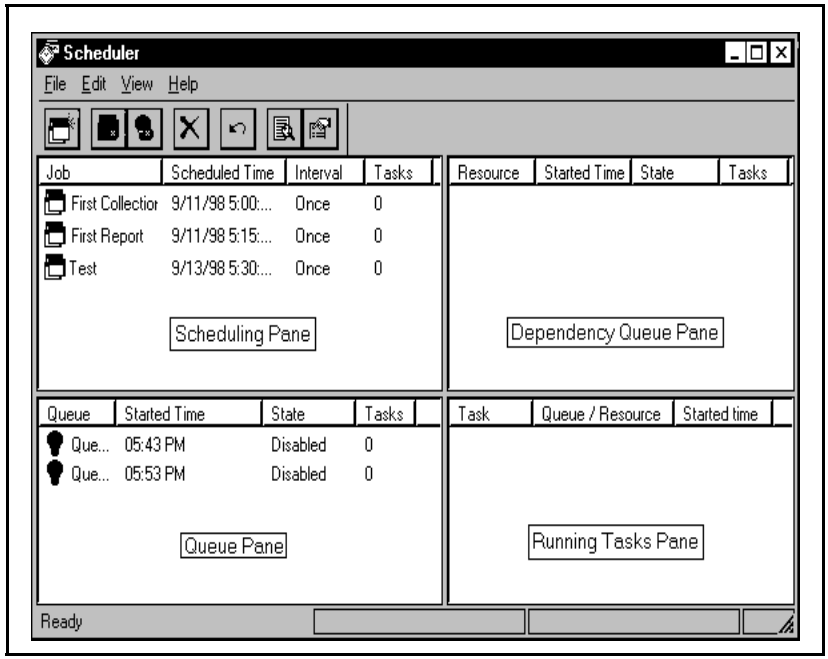
In most cases, one job will have one task. This simplifies the process of defining and scheduling activities. You would simply schedule the activity, assign it as a task to a job, and then enter its scheduling criteria. There are instances, however, when it would be beneficial to assign multiple tasks to a single job (e.g., in situations where you wish to run multiple tasks all at the same scheduled time). The Scheduler allows you to assign multiple tasks to each job after they have been defined.

About the Scheduler window

The following sections describe the Scheduler window and the menus of the Scheduler.

The main Scheduler window contains sections which list the scheduled jobs and queues. These sections provide the interfaces for the Job, Queue, and Dependency Queue Managers and list the running tasks for each job. Use these sections to view and access your jobs and queues.

Figure 32
Scheduler window



The main Scheduler window contains the following information sections.

Scheduled jobs section

The Job Manager displays the details of all of the scheduled jobs in the top left section of the window. The display shows the job name, scheduled date and time for initial execution, intervals, and number of tasks in the job.

Job in the queue section

The Queue Manager displays the current status of jobs in the queue in the bottom left section of the window. When the last task of a job completes, the queue record disappears.

Dependency resource section

The top right section of the window displays the current status of the dependency queues whose tasks are executing. The Dependency Queue Manager displays the information. A dependency queue is a collection of tasks requiring the same system resource (e.g., two tasks need to access a COM port at the same time).

The following describes the properties of a dependency queue's tasks.

- Each task in the dependency queue is a top task of some queue.
- The order of tasks in the task list of a dependency queue defines the order of task execution.
- You can move tasks in the list up or down or edit tasks, except a task that has started processing.
- When a task completes, its record disappears from the task list.
- Tasks requiring more than one system resource appear in more than one dependency queue. If you delete a task record from one dependency queue, the task record is automatically deleted from other dependency queues.

Tasks running section

The bottom right section shows the tasks that are running now. From here, you can delete any running tasks. When deleted, a task is no longer monitored by the Scheduler. If you delete a task, the application containing that task continues to run.

File Menu

From the File menu commands you can manage the Scheduler jobs and queues and exit from the Scheduler. Use the Help command to get detailed descriptions about the functions of each command.

Edit Menu

The Edit menu allows you to manage defined jobs or queues. Use its commands to enable or disable the defined jobs or queues. Use the Help command to get detailed descriptions about the functions of each command.

View Menu

The View menu allows you to:

- display or hide the Scheduler's toolbar and status bar
- view the task list of the highlighted job or queue
- arrange the jobs or queues within each section of the window

Import and Export Utilities

This chapter contains a general overview of the Import and Export utilities. It describes their basic function and purpose.

The Import and Export utilities are used to import and export data to and from the Optivity Telephony Manager (OTM) data base files. These tools allow you to share data between the OTM data bases and other applications.

Examples of situations in which you would find the Import and Export utilities useful are:

- If you are installing a new Meridian 1 system, and already have a source that contains user data (i.e., Names, Departments, Managers), you may import these fields into the OTM Directory. You can then use Station Administration to assign telephones to the imported user records.
- Synchronizing with an LDAP database to complete the unique identifier (UID) fields.
- The OTM Directory can be exported for external telephone book generation or for importing into other external data bases.

Import utility

The Import utility is used to import data records from an external source to a specific site/system and convert them to a format compatible with the OTM data bases. This function is useful for quickly updating your data bases with data from another application.

When importing data, you can select from a predefined import configuration or you can define your own configuration. The following sections will outline how to import data using a predefined and custom configuration. Review the sections later in this chapter for details on the functions and dialogs used to perform these steps.

Import data using a predefined configuration

To import data using a predefined configuration, you must first select the configuration and its component values. This configuration outlines the parameters of the data being imported. This includes such information as the format of the data, the types of records and their field parameters (character length, position etc.). OTM includes a set of predefined import configurations for common data base types. You can then select the source from where you will import the data (e.g., disk drive, CD-ROM etc.).

The following is a summary of the steps required to import data using a predefined configuration.

Step 1: Access the Import utility.

Step 2: Select the import configuration components.

Step 3: Define the import configuration.

Step 4: Import the data.

Import data using a custom configuration

To import data using a custom configuration, you must first define the import configuration. This configuration outlines the parameters of the data being imported. This includes such information as the format of the data, the types of records and their field parameters (character length, position etc.). You can then select from where you will import the data (e.g., disk drive, CD-ROM etc.).

The following is a summary of the steps required to import data using a custom configuration.

Step 1: Access the Import utility.

Step 2: Define the import configuration components.

Step 3: Define the import configuration.

Step 4: Import the data.

Access the Import utility

To import data using a predefined or custom configuration, access the Import utility. Depending on which application you are using, the Import utility may be accessed from several locations.

For example, if you are accessing the Import utility from the OTM Telecom Billing System, then you would click **File | Import** from its main window. The Import dialog will appear allowing you to select from a list of predefined configurations or add your own custom configuration. Once you have selected the predefined configuration and the source directories, click **Go** to import the data.

Selecting import configuration components

The Import (Select an Import Configuration) function is used to select a predefined import configuration. To select a predefined import configuration:

1 Click the import configuration name from the “Select an Import Configuration” drop-down list box.

2 To define the components of the imported file, click the ellipsis command button (**…**). The Import Configuration Definition dialog will appear allowing you to select the tables or data bases you wish to import.

3 Once you have selected the predefined configuration and the source directories, click **Go** to import the data.

Import configuration list

If you are creating a new import configuration, then clicking the ellipsis command button (**...**) will access the Import Configurations List dialog. The Import Configurations List dialog contains a list of predefined import configurations. To create a new configuration:

1 Click **Add**. This will access the Import Configuration Definition dialog where you can enter the importing information.

Note: To edit an existing configuration, click the name of the configuration and click **Edit**. Again, this will access the Import Configuration Definition dialog where you can enter the new definition.

2 To select an import configuration, click the name of the import configuration name to highlight in the list and **OK** to select it.

Defining an import configuration

The Import Configuration Definition function is used to select and define the type of data being imported into the OTM data bases. Enter the following information to define the import configuration:

1 Configuration Name: Enter the name of this configuration. The name helps to identify this configuration from others in the Import Configurations List.

2 Tables/Database menu tree: Select the type of tables into which the data will be imported. For example, if you are importing data into the OTM Telecom Billing System, you can select from: Call Records; Organization Levels; and Tax Types to import data into these data bases.

3 File/Database Type: From this drop-down list box, select the type of data being imported. Select from the following:

- dBase IV
- Excel 5
- Microsoft Access
- ODBC Data Source
- Text File (Comma Separated Values)
- Text File (Fixed Width)

4 File/Database Location: To select the source of the imported data base file (i.e., the directory or drive from which the file will be imported), click the ellipsis command button (**...**) next to the File/Database Location field. From the Directory Location Form dialog that appears, select the drive and directory of the data base file being imported and click **OK**. Notice that this will appear in the File/Database Location field.

5 Import Profile Format: To select the format of the imported file, click the **Format** button. This will access the Import Format dialog in which you can select the field properties for the imported file.

6 File/Table Name: From this drop-down list box, select the filename of the data base being imported.

7 Update Activity: This option determines how this data base will be updated. Select from the following options.

Table 6
Import update activity options

Option	Meaning
Append non matching	Appends non-matching records
Update matching	Updates matching records
Update matching or append	Either updates or appends as appropriate
Delete matching!	Deletes matching records
Delete all rows then append!	Purges entire table before appending
Recreate table then append!	Drops and recreates table before appending

8 Purge records after writing: Turn on this check box to delete the records from the source file after they have been successfully written to the destination file.

Note: This action is not reversible. Therefore, use caution if selecting this option.

9 Description: This field describes the contents of the table selected from the Tables/Database Name menu tree.

10 Once you have entered this information, click **OK** to save these edits and return to the previous dialog.

Import data

11 Once you have selected the import information, click **Go** to proceed. The Import utility will then attempt to import this data into the site/system files.

Example data import

The following example will demonstrate how to import data using a predefined configuration.

This example outlines how to import data from the MAT Call Accounting Employee Database to a site/system while running the OTM Telecom Billing System. This example uses a fictitious import configuration entitled: **MAT Import**. For this example, the Employee Database file is located in **C:\MAT**. The filename is **EMPLOY1.DAT**.

1 From the Telecom Billing System main window, click **File | Import**. The Import dialog appears.

2 From the Select an Import Configuration drop-down list box, select **MAT Import**.

3 To select the import values, click the ellipsis command button (**…**). The Import Configuration dialog appears.

4 From the data base name menu tree, select **Employee Database**.

5 To select the source of the imported data base file, click the ellipsis command button (**…**) next to the File/Database Location field.

6 From the Directory Location Form dialog, select: **C:\MAT** and click **OK**.

7 From the File/Table Name drop-down list box, select: **EMPLOY1.DAT**.

8 From the Update Activity drop-down list box, select the default: **Append All**.

9 To proceed with the data import, click **Go**.

Restore Call Database using Import utility

This example demonstrates how to restore the Telecom Billing System's Call Database from the A: drive. To restore the Call Database, perform the following steps.

1. Access the Import utility by clicking **File | Import** from the Telecom Billing System main window.
2. Select **Merge CDR/Costed Data** as the Import Configuration.
3. To define the parameters for this restore operation, click the ellipsis command button (**...**) next to this list box. The Import configuration dialog appears listing CDR/Costed Data Merge as the destination (To Telecom Billing System).
4. In the File/Database Location field, enter the source of this restore operation. For example, enter: **A:** for a floppy disk drive. Click the ellipsis command (**...**) to view a list of available drives.
5. If you wish to restore a range of call records based on their dates, then click the ellipsis command (**...**) next to the Filter drop-down list box.
6. In the Filters dialog that appears, create a new filter definition and enter the range of call dates for this filter.
7. Select this new filter name from the Filter drop-down list box.
8. Click **Go** to proceed with the restore operation.

Export utility

The Export utility is used to export data from the OTM data bases to an external source. This is useful for archiving a range of data for later retrieval. For example, if you wish to archive a range of CDR data to an external source, then you would use the Export utility to select a range of data and specify the external source.

When exporting data, you can select from a predefined export configuration or you can define your own custom configuration.

Export data using a predefined configuration

To export data using a predefined configuration, you must first select the configuration and its component values. This configuration outlines the parameters of the data being exported. This includes such information as the format of the data, the types of records and their field parameters (character length, position etc.). OTM includes a set of predefined export configurations for common data base types. You can then select from where you will export the data (e.g., disk drive, CD-ROM etc.).

The following is a summary of the steps required too import data using a predefined configuration:

Step 1: Access the Export utility.

Step 2: Select export configuration components.

Step 3: Define export configuration.

Step 4: Export the data.

Export data using a custom configuration

To export data using a custom configuration, you must first define the export configuration. This configuration outlines the parameters of the data being exported. This includes such information as the format of the data, the types of records and their field parameters (character length, position etc.). You can then select to where you will export the data (e.g., disk drive, CD-ROM etc.).

The following is a summary of the steps required to export data using a custom configuration:

Step 1: Access the Export utility

Step 2: Define export configuration components

Step 3: Define export configuration

Step 4: Export the data

Access the Export utility

To export data using a predefined or custom configuration, access the Export utility. Depending on which application you are using, the Export utility may be accessed from several locations.

For example, if you are accessing the Export utility from the Telecom Billing System, then you would click **File | Export** from its main window. The Export dialog will appear allowing you to select from a list of predefined configurations or add your own custom configuration. Once you have selected the predefined configuration and the source directories, click **Go** to export the data.

Select export configuration

The Export (Select an Export Configuration) dialog is used to select a predefined export configuration. To select a predefined export configuration:

1 Click the export configuration name from the "Select an Export Configuration" drop-down list box.

2 To define the components of the exported file, click the ellipsis command button (**...**). The Export Configuration Definition dialog appears allowing you to select the tables or data bases you wish to export.

Note: If you are creating a new export configuration, then clicking the ellipsis command button (**...**) will access the Export Configurations List dialog.

3 Once you have selected the predefined configuration and the destination directories, click **Go** to export the data.

Export configurations list

The Export Configurations List dialog contains a list of predefined export configurations. To create a new configuration:

1 Click **Add**. This will access the Export Configuration Definition dialog where you can enter the exporting information.

Note: To edit an existing configuration, click the name of the configuration and click **Edit**. Again, this will access the Export Configuration Definition dialog where you can enter the new definition.

2 To select an export configuration, click the name of the export configuration name to highlight in the list and **OK** to select it.

Export configuration definition

The Export Configuration Definition dialog is used to select and define the type of data being exported from the OTM data bases. Enter the following information to define the export configuration:

1 Configuration Name: In this field, enter the name of this configuration. This is for informational purposes and helps to identify this configuration from others in the Export Configurations List.

2 Tables/Database menu tree: From this menu tree, select the type of tables from which the data will be exported.

3 File/Database Type: From this drop-down list box, select the type of data being exported.

4 File/Database Location: To select the destination of the exported data base file (i.e., the directory or drive to which the file will be exported), click the ellipsis command button (**...**) next to the File/Database Location field. From the Directory Location Form dialog which appears, select the drive and directory of the data base file being exported and click **OK**. Notice that this will appear in the File/Database Location field.

5 Export Profile Format: To select the format of the exported file, click the Format button. This will access the Export Format dialog in which you can select the field properties for the exported file.

6 File/Table Name: From this drop-down list box, select the filename of the data base being exported.

7 Update Activity: This option determines how this data base will be updated. Select from the following options.

Table 7
Export update activity table

Option	Meaning
Append non matching	Appends non-matching records
Update matching	Updates matching records
Update matching or append	Either updates or appends as appropriate
Delete matching!	Deletes matching records
Delete all rows then append!	Purges entire table before appending
Recreate table then append!	Drops and recreates table before appending

8 Purge records after writing: Turn on this check box to delete the records from the source file after they have been successfully written to the destination file.

Note: This action is not reversible. You should therefore use caution if selecting this option.

9 Description: This field describes the contents of the table selected from the Tables/Database Name menu tree.

10 Once you have entered this information, click **OK** to save these edits and return to the previous dialog.

Export data

11 Once you have selected the export information, click **Go** to proceed. The Export utility will then attempt to export this data from the site/system files to the external device or file.

Archiving Call Database using Export utility

This example demonstrates how to archive the Telecom Billing System's Call Database to the A: drive. To archive the Call Database, perform the following steps:

1 Access the Export utility by clicking **File | Export** from the Telecom Billing System main window.

2 Select **Archive CDR/Costed Data** as the Export Configuration.

3 To define the parameters for this archive operation, click the ellipsis command button (**...**) next to this list box. The Export configuration dialog will appear listing CDR/Costed Data as the source (From Telecom Billing System).

4 In the File/Database Location field, enter the destination of this archive operation. For example, enter: **A:** for a floppy disk drive. Click the ellipsis command (**...**) to view a list of available drives.

5 If you wish to archive a range of call records based on their dates, then click the ellipsis command (**...**) next to the Filter drop-down list box.

6 In the Filters dialog that appears, create a new filter definition and enter the range of call dates for this filter.

7 Select this new filter name from the Filter drop-down list box.

8 Select the **Purge Records After Writing** option to delete the range of call records from the original Call Database once the call records have been copied to the external source. This will clear up disk space on your PC.

9 Click **Go** to proceed with the archive operation.

Corporate Directory

OTM's Corporate Directory is a flexible tool for defining and generating reports of station data associated with a terminal number. Report data is provided by Station Administration. Data can include about 100 different data fields, including the name, extension, location, and department associated with each terminal number.

> ***Note:*** Corporate Directory requires that you have Station Administration and Microsoft Excel 95 or later.

Defining and generating reports

To access the Corporate Directory tool:

1 Select **Corporate Directory** from the **Utilities** menu of the Navigator window. The Corporate Directory window appears where you can view and manage reports.

You can use predefined reports or define new reports.

To define a report:

1 Select **Add Report** from the **Configuration** menu. The New Report property sheet appears, where you can define data fields, column names, column order, and directory location for the report.

To generate a report:

1 Select **Generate Report** from the **File** menu.

2 Select **Now** to immediately display the report in a Microsoft Excel window, print the report, or save it to a file.

Or

Select **Schedule** to have the report automatically generated to a printer or Excel file at a later time. Select a report by name, then select **Open** to display the most recently generated version of that report.

Note: Before you can generate reports, Station Administration data must be downloaded from the switch and you must have at least one customer configured for each system.

See "Generating Reports" in the *Station Administration User Guide* for more information.

Database Compact/Repair Utility

This chapter describes its functions and purpose of the OTM Database Compact and Repair utility. For complete details on using this utility, refer to the online Help included with the software.

Use the Compact and Repair utility to compact or repair the OTM data base files for specific sites and systems. This utility will compact or repair any Microsoft Access format data base files of the same version as OTM (e.g., Access 97).

The following are two common reasons to compact data base files:

- Increase in size

  CDR data that is accessed by OTM Telecom Billing System and OTM Directory is stored in data base files. These data base files grow as records are added and deleted. Periodically, the data base files should be compacted to increase access performance. This is especially true of very active files such as CDR data base files.

- File fragmentation

  As you update the OTM data bases, the files can become fragmented and use more disk space than necessary. Use the Compact command to compact these data bases and optimize the disk space used by these data base files. Compacted data bases can often be accessed more quickly. This will save time and system resources when you perform such operations as data base backups.

In some cases, the OTM data bases can become corrupted and may no longer be accessible by the OTM applications. Use the Repair command to try and repair these data bases so they can be accessed by these applications.

CAUTION

This utility creates a temporary copy of the data bases as they are compacted. Therefore, you must have enough disk space for both the original and the duplicate data bases. This operation will fail if the system runs out of disk space.

Note: You cannot run this utility for a specific system if you are running an application within that system. Before proceeding with this utility, exit from the application that is running within that system.

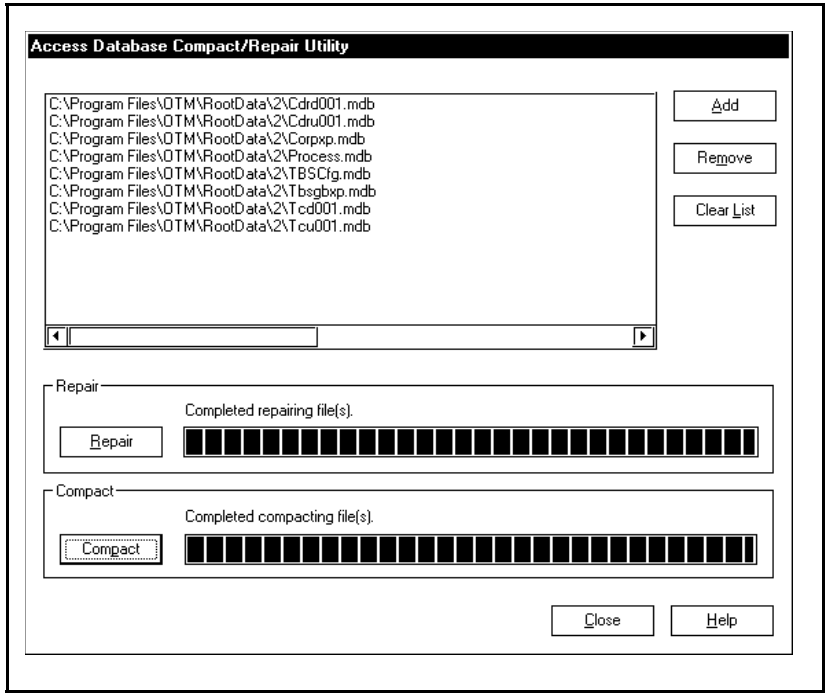
To compact a data base:

1 Click the desired system in the OTM System menu tree.

2 Select Compact from the Utilities menu. The Compact Database dialog appears.

3 Specify the files you wish to compact or repair and click **Compact**.

Figure 33
Access Database Compact/Repair Utility window



Regional Settings

Currency Settings, located under Regional Settings, includes information about local and alternate currencies. The Optivity Telephony Manager (OTM) applications use this information to display costs.

Local Currency

The Local Currency tab contains information about the local currency that is used to display costs in the Optivity Telephony Manager (OTM) applications. This is useful in situations where a single system manages and processes data from many countries and you wish to report costs in different currencies across different systems. Each system could represent sites in different countries. Their costs could then be expressed in their respective local currency.

Currency information, by default, is derived from the client PC's regional settings. However, there are cases where different systems are required to operate with different currencies. In order to facilitate this, OTM allows you to define currency settings for any system as required. In addition, default settings can be configured from the OTM Navigator main window, which can also be used by the OTM systems. These default settings are used by any system that does not have its own settings defined. This is useful in an installation where the majority of systems are operating in a common currency and only a few are operating in a different currency. In this case, you can set the default currency settings for the majority of the systems, and you will only need to configure the exceptions.

To define the local currency, click **Configuration | OTM Regional Settings** from either the OTM Navigator window or the system window. Select from the following options.

Use System Setting (Navigator level only): Turn on this check box to have OTM use the currency settings defined in the client PC's Windows Regional Settings. Notice that the remaining fields will be updated with the Windows Regional Settings currency information and will appear grayed (read-only). You will not be able to edit these fields if you select this option. Since this option is only available at the Navigator level, you can only select this option for the Navigator main window. By default, this option will be enabled (the check box will be turned on).

Use Default Setting (System level only): Turn on this check box to have the system use the default currency settings that you defined in the Navigator window. Notice that the remaining fields will be updated with this default (or shared) currency information and will appear grayed (read-only). You will not be able to edit these fields if you select this option. This option is only available from a system window.

Enter the local currency values in the following fields.

Currency Name: In this field, enter a descriptive name of this currency (e.g., **US Dollars**).

Appearance Samples: These read-only fields will display samples of the costs based on the selected currency settings (e.g., **$123,456.78** and **($123,456.78)**).

Currency Symbol: In this field, enter the symbol for this currency (e.g., $). This will appear next to the cost values on report summaries. If you keyboard does not support the currency symbol that you wish to use, then you may need to enter it using alternate key codes. For example, to enter the symbol for the Euro dollar, press and hold the **[Alt]** key and enter: **0128** on your numeric keypad. The Euro dollar symbol will appear. If a black square appears instead of this symbol, then your system font does not support this character. It should, however, still appear correctly on the printed report.

Position of Currency Symbol: From this drop-down list box, select how the currency symbol will appear next to cost values. The "*" represents where the symbol will appear with respect to the value. For example, ***1.1** indicates that the currency symbol will appear before the values (e.g., **$1.00**).

Negative Number Format: From this drop-down list box, select how negative values will be displayed. For example, **(*1.1)** indicates that negative numbers will appear with parentheses around them (e.g., **($1.00)**).

Decimal Symbol: In this field, enter the symbol that will be used for the decimal (e.g., for the amount $1,000.00, enter: **.**).

Number of Digits after Decimal: In this field, enter the total number of digits that will appear after the decimal (e.g., for the amount $1,000.00, enter: **2**).

Digit Grouping Symbol: In this field, enter the symbol that will be used to separate digit groups when displaying currency values (e.g., for the amount $1,000.00, enter **,**).

Number of Digits in Group: In this field, enter the number of digits that will be separated by the digit grouping symbol (e.g., for the amount $1,000.00, enter: **3**).

Once you have entered these settings, click **Apply** to save them and remain in this tab. Click **OK** to save these settings and exit to the previous window.

Alternate Currency

The Alternate Currency tab contains information about any alternate currencies used when displaying costs in OTM reporting. This is useful in situations where you wish to have reports display monetary values in two separate currencies. For example, European countries could display summary costs in their local currencies and in the new Euro currency.

You can either define the alternate currency settings for specific systems, or have them use the default settings defined in the Navigator level. The alternate currency defined in the Navigator window will be used as the default alternate currency. Any systems that do not have alternate currency settings defined for them will use the default currency settings defined at the Navigator level. As well, you can specify that a system should use the default currency settings.

To define the alternate currency, click **Configuration | OTM Regional Settings** from either the OTM Navigator window or the system window. Select from the following options.

Use Default Setting (System level only): Turn on this check box to have the system use the default alternate currency settings you entered in the Navigator window. Notice that the remaining fields will be updated with this currency information and will appear grayed (read-only). You will not be able to edit these fields if you select this option. This option is only available from a system window.

Enable Alternate Currency (Navigator and System level): Turn on this check box to enable alternate currency settings to be displayed on system billing reports. If you disable this option (i.e., turn off this check box), the remaining fields will appear grayed (read-only) and the alternate currency will not be included in your reports.

Enter the alternate currency values in the following fields.

Currency Name: In this field, enter a descriptive name of this currency (e.g., **US Dollars**).

Appearance Samples: These read-only fields will display samples of the costs based on the selected currency settings (e.g., **$123,456.78** and **($123,456.78)**).

Currency Symbol: In this field, enter the symbol for this currency (e.g., **$**). This will appear next to the cost values on report summaries. If you keyboard does not support the currency symbol that you wish to use, then you may need to enter it using alternate key codes. For example, to enter the symbol for the Euro dollar, press and hold the **[Alt]** key and enter: **0128** on your numeric keypad. The Euro dollar symbol will appear. If a black square appears instead of this symbol, then your system font does not support this character. It should, however, still appear correctly on the printed report.

Position of Currency Symbol: From this drop-down list box, select how the currency symbol will appear next to cost values. The "*" represents where the symbol will appear with respect to the value. For example, ***1.1** indicates that the currency symbol will appear before the values (e.g., **$1.00**).

Negative Number Format: From this drop-down list box, select how negative values will be displayed. For example, **(*1.1)** indicates that negative numbers will appear with parentheses around them (e.g., **($1.00)**).

Decimal Symbol: In this field, enter the symbol that will be used for the decimal (e.g., for the amount $1,000.00, enter: **.**).

Number of Digits after Decimal: In this field, enter the total number of digits that will appear after the decimal (e.g., for the amount $1,000.00, enter: **2**).

Digit Grouping Symbol: In this field, enter the symbol that will be used to separate digit groups when displaying currency values (e.g., for the amount $1,000.00, enter **,**).

Number of Digits in Group: In this field, enter the number of digits that will be separated by the digit grouping symbol (e.g., for the amount $1,000.00, enter: **3**).

Currency Exchange Rate: In this field, enter the exchange rate for this currency against the local currency. For example, if the local currency is the U.S. dollar (US$) and the alternate currency is the Canadian dollar (Can$) and the exchange rate is 1.49, then enter: **1.49** in this field. This means that US$1.00 is equivalent to Can$1.49.

Once you have entered these settings, click **Apply** to save them and remain in this tab. Click **OK** to save these settings and exit to the previous window.

Access Server

The Access Server provides a command line interface (CLI) for remote access to the OTM server. From a remote terminal, you can dial in through modem or direct serial connection to access OTM server.

CAUTION

Access Server must be run under the Windows NT Operating System, as it will not function properly under any other operating system.

Once successfully logged in, you can:

- change Windows NT user passwords,
- connect to different sites and systems as configured in Virtual Terminal Service (VTS, described on page 235).

  Note: CLI needs a dedicated modem. CLI cannot share the modem with Win NT RAS or other services.

CAUTION

If you are not using Access Server, uncheck the “Launch Automatically” check box. This action prevents unnecessarily tying up a COM port on the server.

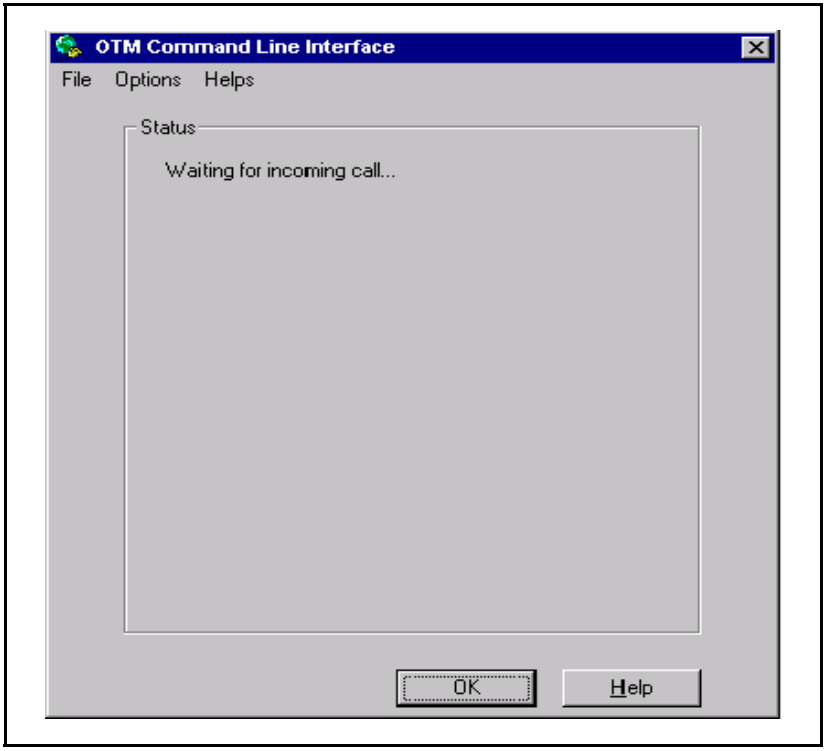
CLI Status window

The CLI launches at OTM Server startup. The status window displays CLI status messages.

The following status messages may appear in the CLI window:

- Waiting for incoming call
- Answer call and authentication process in process

Figure 34
CLI Status window

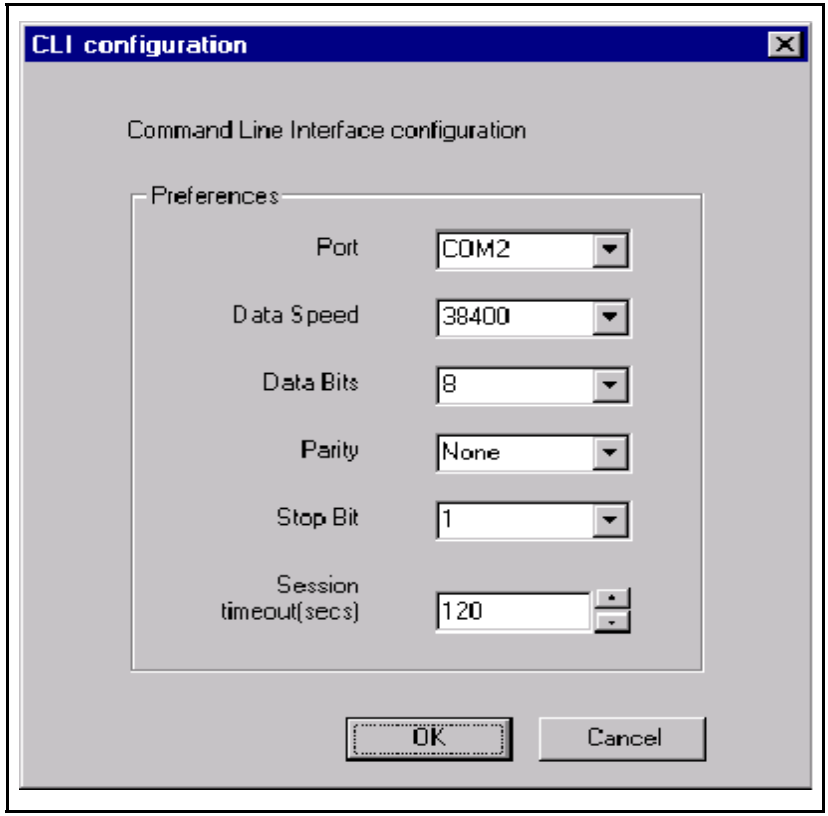


CLI configuration window

The CLI configuration window (Figure 34) is used to define the following OTM Server COM port settings:

Port - list of COM ports on the OTM Server
Data Speed of COM port - 4800, 9600, 19200, 38400
Data Bits - 5, 6, 7, 8 bits
Parity - None, Odd, Even Mark, Space
Stop Bits - 1, 1.2, 2 bits
Session timeout (secs): if current session is idle for the specified time, CLI disconnects the call.

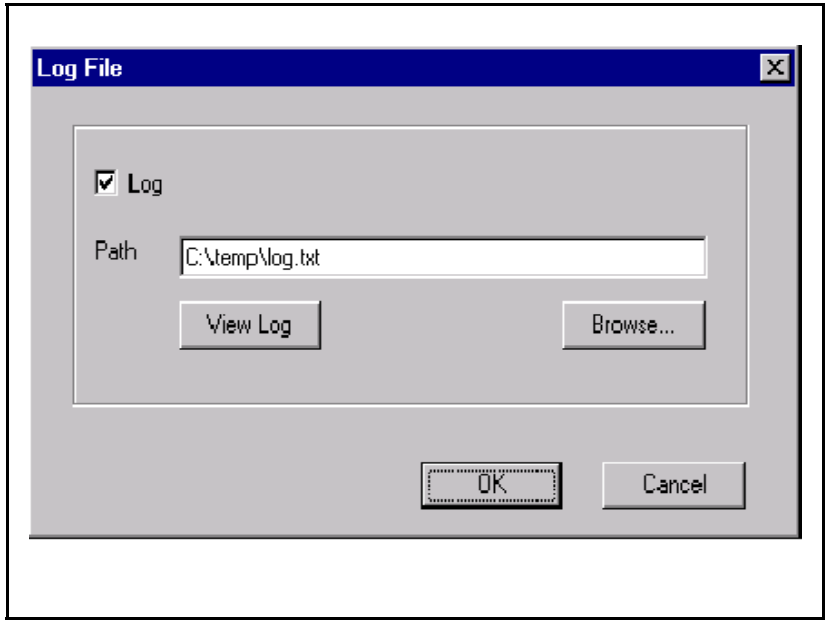
Figure 35
CLI configuration window



CLI Log File window

The Log File window allows you to turn the log option on or off and specify the log file location. Log file logs all activities: user login, commands, etc.

Figure 36
CLI Log File window



CLI Operation

From a different PC, dial into CLI on the OTM Server using HyperTerminal or equivalent Telnet application and enter an OTM userid and password to log in. Once logged in the following commands are available:

- Help or ?- lists all commands
- Status - list all VTS ports associated with configured systems
- Connect - connect to a system
- Exit - disconnect

Figures 37 and 38 show the CLI commands.

Figure 37
CLI Help commands

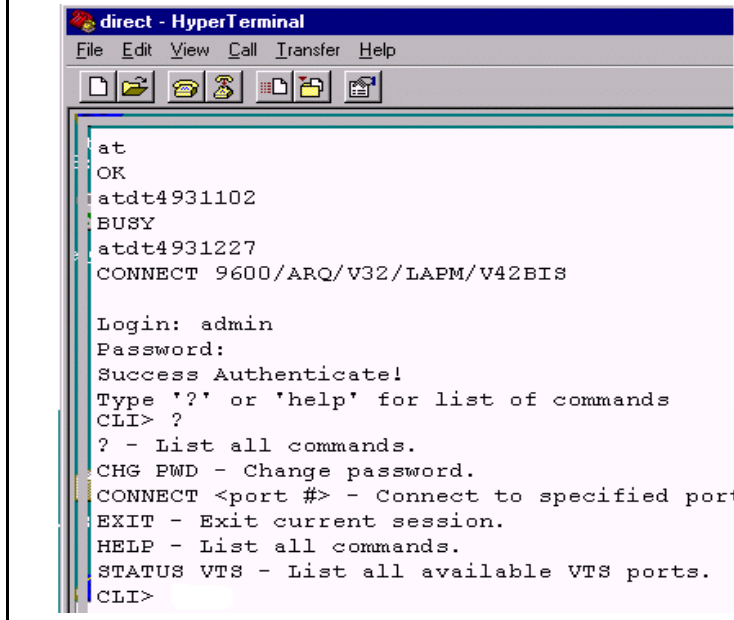
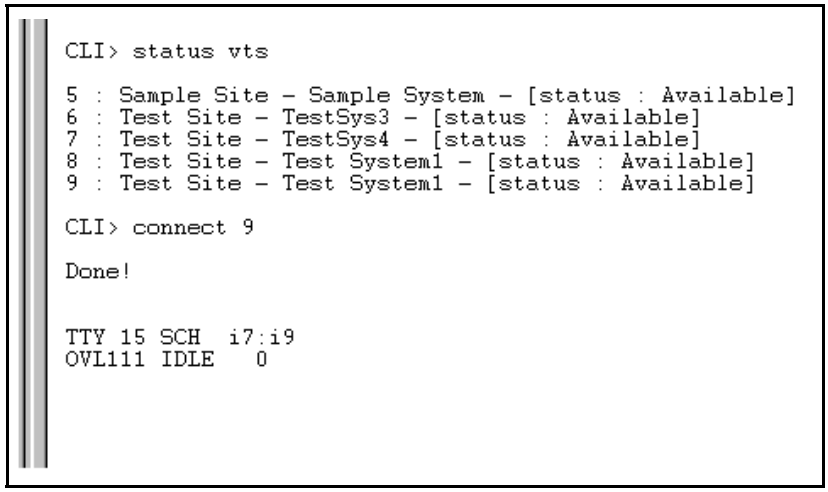


Figure 38
CLI Status and Connect commands


CLI> status vts
5 : Sample Site - Sample System - [status : Available]
6 : Test Site - TestSys3 - [status : Available]
7 : Test Site - TestSys4 - [status : Available]
8 : Test Site - Test System1 - [status : Available]
9 : Test Site - Test System1 - [status : Available]
CLI> connect 9
Done!
TTY 15 SCH i7:i9
OVL111 IDLE 0

Communication

Both the Terminal Server and Client can detect when their TCP socket connection is lost. In that case, they will log the error and/or notify the user, and reset themselves for another connection.

The base port number is determines the range of socket ports used to communicate with the Terminal Client. However, normally this should be left as-is, and should not be changed unless the default port conflicts with another network application.

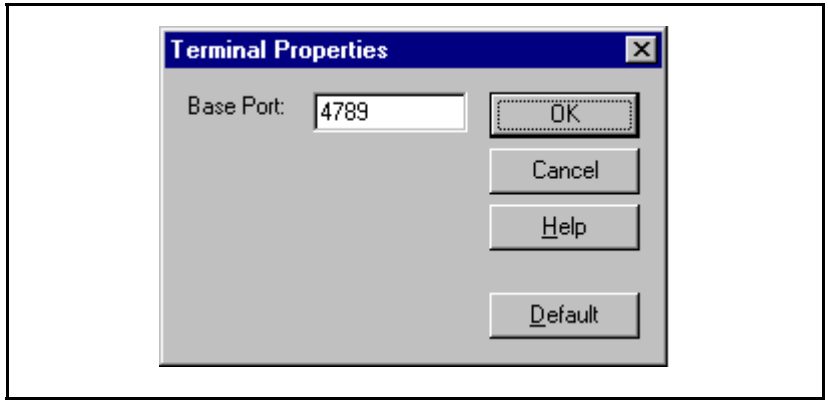
By default, the Terminal Server and Terminal Client communicates through network ports 4789 up to 5045 (4789 to send connection requests, 4790-5045 for up to 256 terminal sessions). Of course, the number of ports actually used depends on the number of virtual ports configured.

An administrator can change the range of port numbers by doing the following:

- In the Terminal Server application, click the Clients button. In the Client Properties dialog, enter the new port number.

- Edit the HTML page containing the applet. Make sure the applet's BASEPORT parameter matches the one in Terminal Server (default =4789).

Figure 39
The BASEPORT parameter



Encryption

Data is encrypted, so that someone monitoring the network traffic does not see plain ASCII data (which may contain user login, password, or other sensitive information).

Every packet sent between the Terminal Server and the Terminal Client is 65 bytes, and contains data that is masked with a key. This ensures that data isn't easily readable, while keeping the overhead low for constant character I/O.

Before sending a packet, the application picks a random location in a 256-byte key (known only to the server and the client) and uses the subsequent bytes to mask the character data. In essence, every packet is masked with one of 256 possible keys.

Backup and Restore

OTM's Backup and Restore utilities provide convenient options for safeguarding, cloning, and restoring OTM data on a PC. The Backup utility lets you create a OTM backup file of PC-based system property and application data for any or all sites and systems. The Restore utility lets you restore a backup file to the same or different sites and systems on the same or other PCs.

> ***Note:*** The Backup and Restore utilities have no affect on Meridian 1 data. To secure OTM data that has been uploaded to the switch, you must use OTM's Electronic Data Dump feature described on page 169.

Media, files, and data types

You can create a OTM backup file on the PC's hard drive, a network drive, diskettes and other removable disks, or any other available media that meets your requirements for convenience and file space.

All backup data is written to a single folder for each backup operation. This folder includes the following files:

- Zip file (*.ZIP), the backup file in compressed format
- Log file (*.LOG), providing the backup file's date; type; OTM version; and sites, systems, and applications by name

You can back up and restore data for all or any combination of the following OTM applications:

- Telecom Billing System
- Call Tracking
- ESN
- Station Administration
- Traffic Analysis

You can back up and restore data for these applications across multiple sites and systems at the same time.

Applications are associated with specific sites and systems. All backups of application data include the system property data associated with the selected site or system.

When you restore data from a backup file, you have the option ***not*** to restore system property data. This option is useful in cases where the destination site or system is pre-configured and you do not want to overwrite its system property data. For example, system property data such as communication ports, modem configuration, and user ID and password, may be different from one PC to the next.

Benefits

The Backup and Restore utilities provide several key benefits:

- cloning
- moving data offsite
- disaster recovery

Cloning

The process of copying system property and application data associated with one site or system to another site or system is called *cloning*. Copying data to another site or system can be a great timesaver. It can save you from having to enter a large amount of similar data one item at a time.

After cloning selected data, you can simply focus on making whatever changes are necessary to the cloned data. This operation is very flexible. The destination site or system can be new or already exist, and it can be on the same PC or on another PC.

> ***Note:*** If you back up data from one PC and restore it to another, you must perform this operation under the same version of OTM. You cannot back up data from a PC with an older version of OTM and then restore the data to a PC with OTM. Upgrade the older version of OTM before performing this type of cloning operation.

Moving data offsite

If you want to maintain or occasionally modify OTM data offsite, a OTM backup file provides the solution. You can restore the backup file on any PC that has the same version of OTM installed.

When you finish modifying OTM data, create a new backup file. Then you can restore the modified data to the original or primary PC where OTM is installed.

> ***Note:*** This operation works particularly well for modifying application data. Remember *not* to restore system property data from one PC to another if the PCs need to have different configurations for the corresponding sites and systems.

Disaster recovery

An important part of safeguarding your OTM data is having a disaster recovery plan. This plan should consider who makes the backups, what is backed up, how often, on what media, and where the backups are stored.

The Backup utility includes a more comprehensive backup option that is designed for disaster recovery. This option automatically backs up all sites, systems, and applications, and additionally saves user-created files such as scripts and customized reports. Consider performing this type of backup at least once a month and storing the backup file in a safe place.

In the event of unrecoverable data loss, restore your disaster-recovery backup file first. All file contents are restored to the PC. Then, if you have backups for selected sites, systems, and applications that are more recent, restore them next.

> ***Note:*** OTM executables and files that can be reinstalled from the OTM CD are *excluded* in a disaster recovery backup. If OTM executables have been damaged or lost due to a hard-disk crash, for example, you will need to reinstall OTM on your repaired or replaced PC before restoring your disaster recovery backup.

Running the Backup utility

To run the Backup utility:

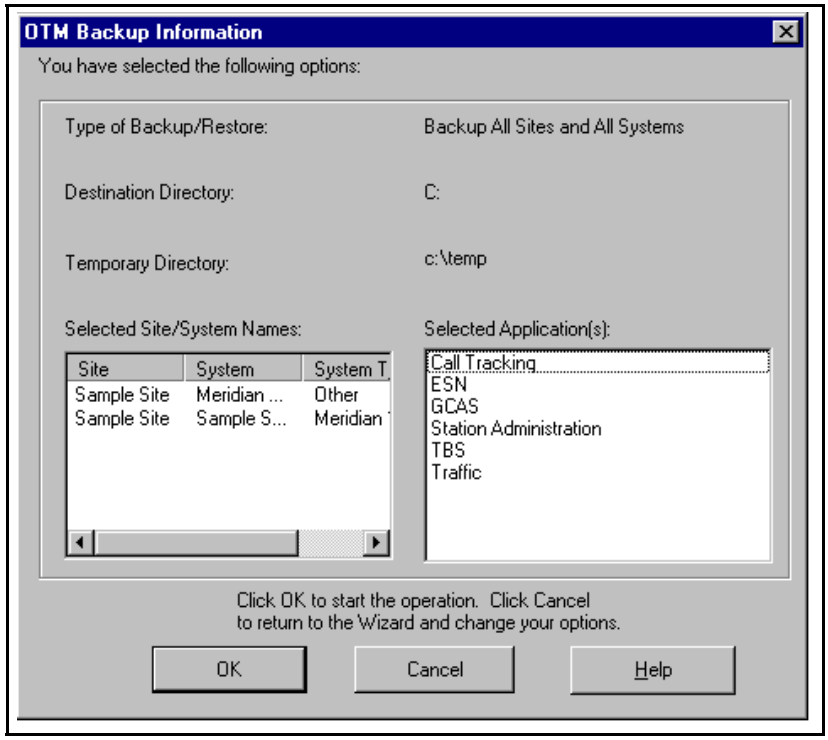
1 Select **Backup** from the **Utilities** menu of the Navigator window. This invokes a wizard to help you define the following parameters:

- Type of backup (single site, single system, all sites and systems, or disaster recovery)
- Applications (Call Accounting, Call Tracking, ESN, Station, and/or Traffic)
- Destination directory for backup files
- Temporary directory for working files created during the operation

Note: The destination and temporary directory screens display a computed space requirement for the files. You can back up and restore data for these OTM applications across multiple sites and systems at the same time.

2 The next screen to appear is a dialog box (Figure 40) that summarizes your choices. Click **OK** to start the backup operation, or **Cancel** to return to the wizard and change your options.

Figure 40
OTM Backup Information dialog box



Running the Restore utility

To run the Restore utility:

1 Select **Restore** from the **Utilities** menu of the Navigator window. This invokes a wizard to help you define the following parameters:

- Type of restore (single site, single system, all sites and systems, or disaster recovery)
- Specific backup file and destination directory
- Temporary directory for working files created during the operation

2 The next screen to appear is a dialog box that summarizes your choices. Click **OK** to start the restore operation, or **Cancel** to return to the wizard and change your options.

Directory Services

The OTM Directory feature allows you to input end user data through the OTM applications, such as Station Administration and Telecom Billing System, directly into the customer's server. OTM Directory contains employee and organization details, with a number of fields that are common to both Directory and Station Administration. The two data bases are then synchronized using the Audit functions (See Station Administration).

OTM Directory provides a number of tools to configure your company structure and create an employee data base:

- an Organization Hierarchy editor to define your business organization
- an Employee Selector to manage user data
- an External Parties editor to configure external party records
- a Roles/Project editor to create role and project groups within the organization.
- synchronization utilities to update Station Administration with all the changes made to Directory data.

  Note: The data is scheduled for synchronization from the Utilities menu in the Navigator window. See "LDAP Synchronization" on page 155.

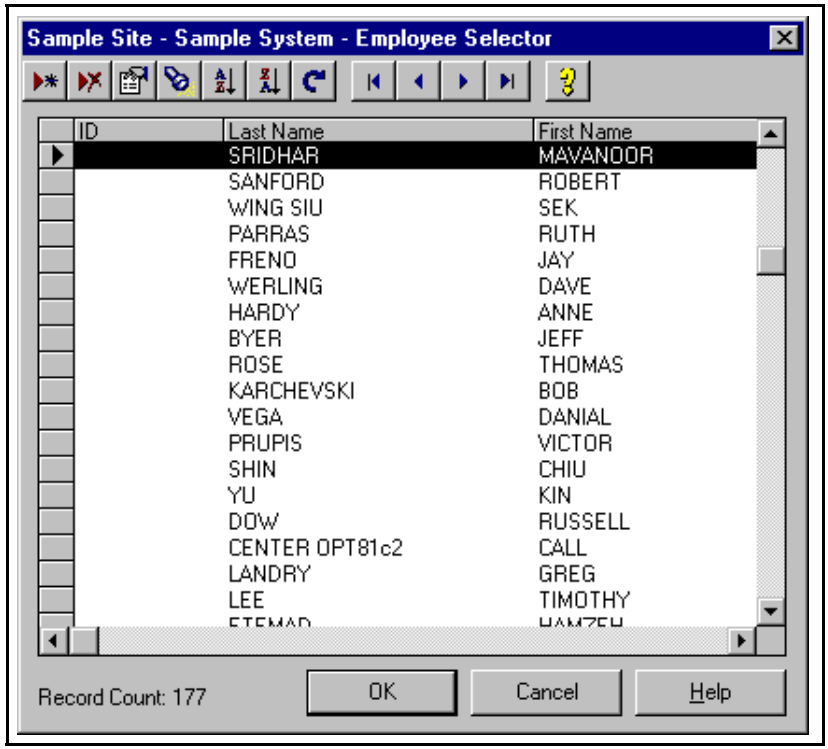
Access OTM Directory

OTM Directory is accessed from within the Station Administration System window in the following ways:

- The Employee Selector, External Parties, Roles/Projects and Organizational Hierarchy options available in the View menu.

- The Directory button in the Station Set window (as shown in Figure 41), which is accessed by double-clicking on an individual station from the list of stations in the Station Administration window

Figure 41
Employee Selector window from Directory button in Station Set



- From within the Telecom Billing System (TBS) **Edit** menu. For more details, see the *Optivity Telephony Manager Telecom Billing System User Guide*.

  Note: The links between Station Administration and OTM Directory are described in more detail in the *Optivity Telephony Manager Station Administration User Guide*.

Organizational Hierarchy Editor

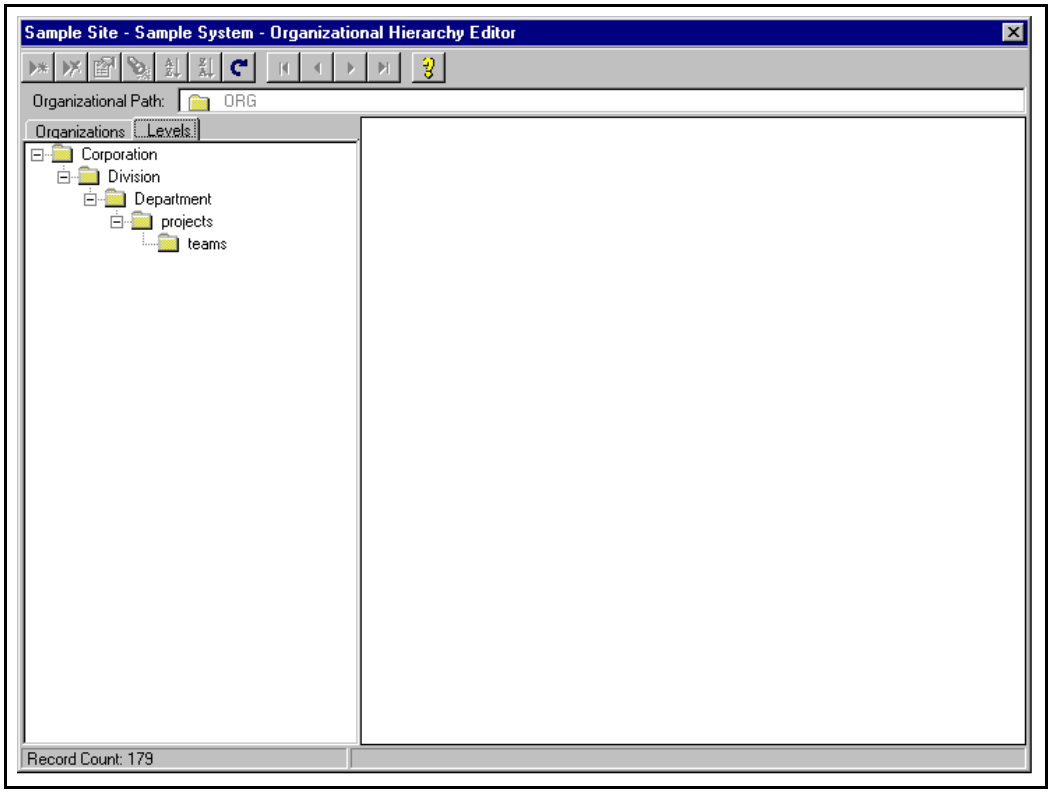
The Organizational Hierarchy Editor allows you to create and edit the structure of your company. You build an organization tree representing the different organization nodes in your corporation such as, divisions, departments, projects, and project teams. You can place each organization node at its level in the hierarchy. After defining an organization node in the structure, you can assign employees to the node using the Org. Path field in the Employee Editor.

Access the Organizational Hierarchy Editor

To access the Organizational Hierarchy Editor, select Organizational Hierarchy under the View menu in the System window.

The Organizational Hierarchy window is where you define the structure of your organization. The left side of the window shows the organization hierarchy tree. The right side of the window is the Employee Selector providing a list of employees related to the selected organization node.

Figure 42
Organizational Hierarchy Editor, Levels Tab



Define organization levels

Before you begin adding organization nodes to the tree, define the levels of the organizations in your company. The levels represent the structure of your company. For example, the company can have divisions, departments within divisions, and projects within departments. You can define a maximum of 20 different levels.

1. Click the Levels tab. The tree displays the levels defined for the structure. If you have not yet entered the structure for your organization, the window contains a default menu tree with the Organization, Division and Department levels.
2. Click the level where you want to define a new level.
3. Right mouse click to open the Add New Level dialog.
4. Type the name of the new level and click OK.

To delete a level, select the entry and click the Delete key on the toolbar.

As shown in the example in Figure 42, the levels are defined as:

- corporation
- divisions within the corporation.
- departments within the division
- projects within the department
- employee teams within the project.

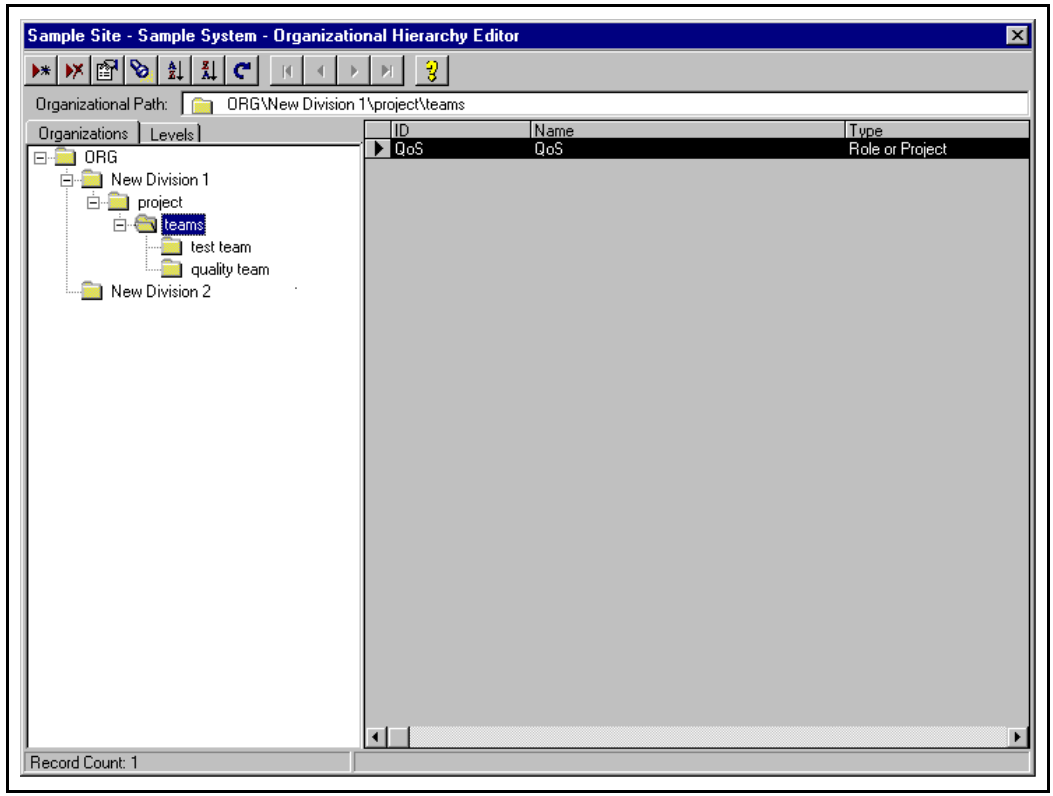
Add an organization node

To add an organization node:

> ***Note:*** You must define an organization level before you can add an organization node at that level. See "Define organization levels" on page 139.

1. Select the Organizations tab (Figure 43).
2. Select the name of the organization in the tree where you want to add a new organization node. For example, if adding a new department to a division, select the name of the division.
3. Click the right mouse button and select Add New Node or click the Add icon (the toolbar button with the plus sign). The new node appears in the tree. For example, if adding a new division, Division appears in the tree.
4. Click the right mouse button and select Rename to give the new node a name. Type over the name.

Figure 43
Organizational Hierarchy Editor, Organizations Tab



Delete an organization node

To delete an organization node:

1. Select the organization node in the tree.
2. Click the Delete button (toolbar button with the X). The node disappears from the tree.

Employee Selector Window

The right pane of the Organizational Hierarchy window consists of the Employee Selector window.

> ***Note:*** The Employee Selector window is also displayed as an individual window by clicking on the Directory button in the Station Set window (Figure 41).

This window displays the list of current Employee entities in the Directory database, and allows you to create a new employee entity, add it to your organizational node, and to edit the details of an existing entity.

The icons in the Organization Hierarchy toolbar allow you to edit the Employee records listed or create new Employee, Roles/Projects or External Parties records to be added to your organizational node. As they appear from left to right, they allow you to:

- **Add new record**: select a record type (Employee, External Party, Role/Project) from the Entity Selector. You can then add a new Employee record to the database (which opens the Employee Editor), or add a new Roles/Projects record (which opens the Roles/Projects Editor) or a new External Party record (which opens the External Parties Editor).
- **Delete record**: delete the selected record from the database. See “Delete employees” on page 144.
- **Edit Record**: edit the selected record. This opens the Employee Editor window, in which you can edit the Employee details
- **Find**: search for a specific record. Enter a text string and select a field from ‘ID’, ‘Entity Type’ or ‘Name’ by which to search the database. See “Search for an employee” on page 144.
- **Sort Ascending**: sort the employee records in ascending order. See “Sort the employee list” on page 145.
- **Sort Descending**: sort the employee records in descending order.

- **Refresh View**: refresh the list following changes
- **Move First/Previous/Next/Last**: move the cursor to the top of the list, to the previous entity to the one selected, to the next entity to the one selected, or to the end of the list.
- **Help**: consult the On-Line Help system.

Add an employee to an organization node

To add an employee to an organization node:

1. Select the organization node in the tree.
2. Click the Add button (toolbar button with the plus sign). The Entity Type Selector window opens.

   You have the option to add a new Employee, External Party or Role/Project. When you select a type, the Editor for that type is displays. In this case, select Employee
3. The Employee Selector window opens. Select the employee you want to assign to the selected organization node.

Edit employee data

To edit employee data:

1. Select the organization node in the tree. The names of the employees appear in the Employee Selector window.
2. Select the name of the employee you want to edit.
3. Click the Edit button (toolbar button with the pencil). The Employee Editor opens. See “Edit employee data” on page 151.

Delete employees

To delete an employee from an organization node:

1. Select the organization node in the tree. The names of the employees appear in the Employee Selector window.
2. Select the employee you want to delete.
3. Click the Delete button (toolbar button with the X). The employee disappears from the list.

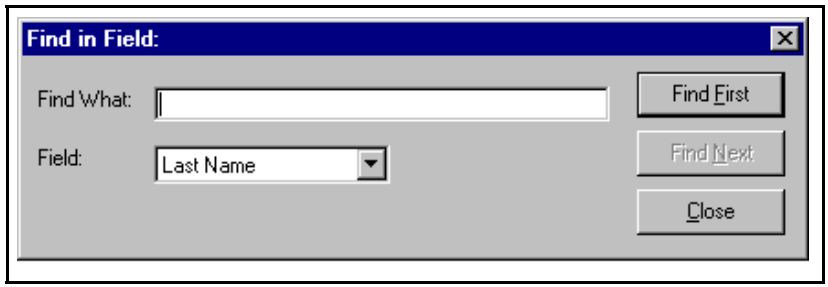
Note: This action deletes the Employee from the Organizational Node, but the Employee Entity still exists in the OTM Directory database. The Entity can only be removed from OTM Directory through the Employee Selector window, as accessed through the Directory button in Station Administration. For more details on the link between Station Administration and OTM Directory, see the *Optivity Telephony Manager Station Administration User Guide*.

Search for an employee

To search for a specific employee:

1. Select the organization node in the tree.
2. Click the Search button (toolbar button with the flashlight). The Find in Field search dialog displays.

Figure 44
Find in Field search dialog



3. Select the field you want to search from the drop down list in the Field box.
4. Enter the character string to search for in the Find What box.

5 Click one of the following buttons:

- Find First - finds the first occurrence of the character string.
- Find Next - finds the next occurrence of the character string.
- Close - ends the search.

If the search finds a match, the employee's name appears highlighted in the Employee Selector window.

Sort the employee list

To sort the employee list:

1 Select the organization node in the tree.

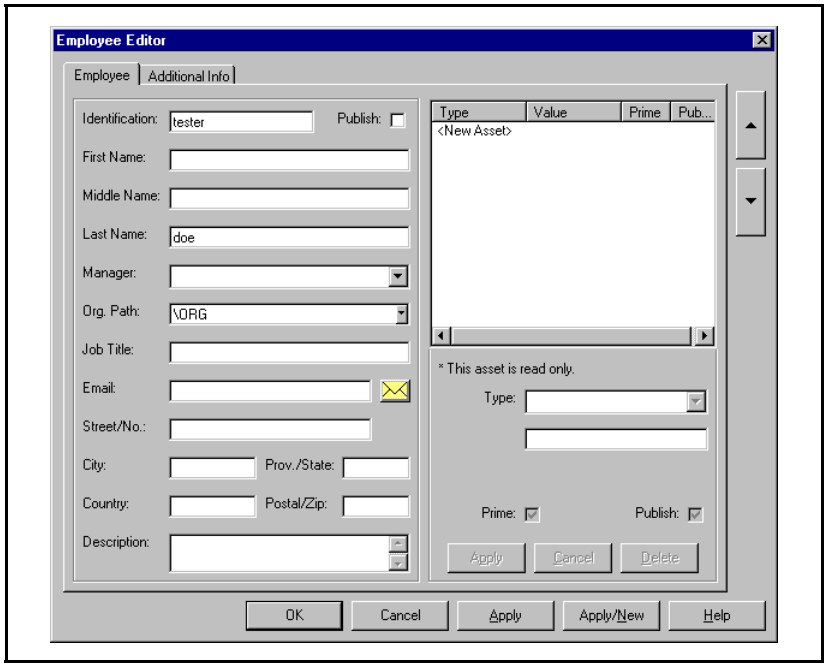
2 Click the column header of the column you want to sort in the Employee Selector window.

3 Click the Sort Up or Sort Down button (toolbar buttons with AZ Up or AZ Down).

Employee Editor

The Employee Editor allows you to add new employees and update employee personal and job related data. The tabs on the right side of the window allow you to define the assets assigned to the employee. You can also define the property assigned to the employee such as telephone and terminal numbers.

Figure 45
Employee Editor Window



Access the Employee Editor

There are several ways to access the Employee Editor:

- Click the Add or Edit button in the Organizational Hierarchy Editor window.
- Double-click an employee's name in the Employee Selector window.

To add a new employee:

1 The Employee Editor window opens with the Employee tab. The fields are blank. Enter the employee data as follows:

- Enter the employee information in the appropriate fields.
- How you access the Employee Editor determines if the Org. Path field shows a drop down selection box or not. If the drop down is active, the organization structure tree displays. Select the organization node for the employee from the tree. If the drop down box is not active, type the path to the organization node for the employee.
- The Manager field has a drop down box where you select the employee's manager.
- Click the envelope icon next to the Email field to enter the employee's default email address or type the email address. This sends email to the employee with a corporate LDAP compliant server.
- Click the Publish check box to share the employee information. Do not click the check box if the information is private.

2 Enter the asset information as follows:

- Select New Asset in the Type column. The edit boxes below the grid become active.
- Select the type of asset from the drop down list in the Type field.

  The asset types available identify the employee in the different OTM applications. Select from Account Code, Authorization Code, Extension, Phone Number, or Trunk Number. Depending on the type selected, a corresponding field entry will appear, into which you enter a value.
- If the employee will be the prime user of this asset, turn on the Prime check box. This will allow several employees to use the same asset, while one employee in particular is the main owner

of the asset and will be assigned the cost.

- Click the Publish check box to share the employee asset information. Do not click the check box if the information is private
- Click the Apply button.

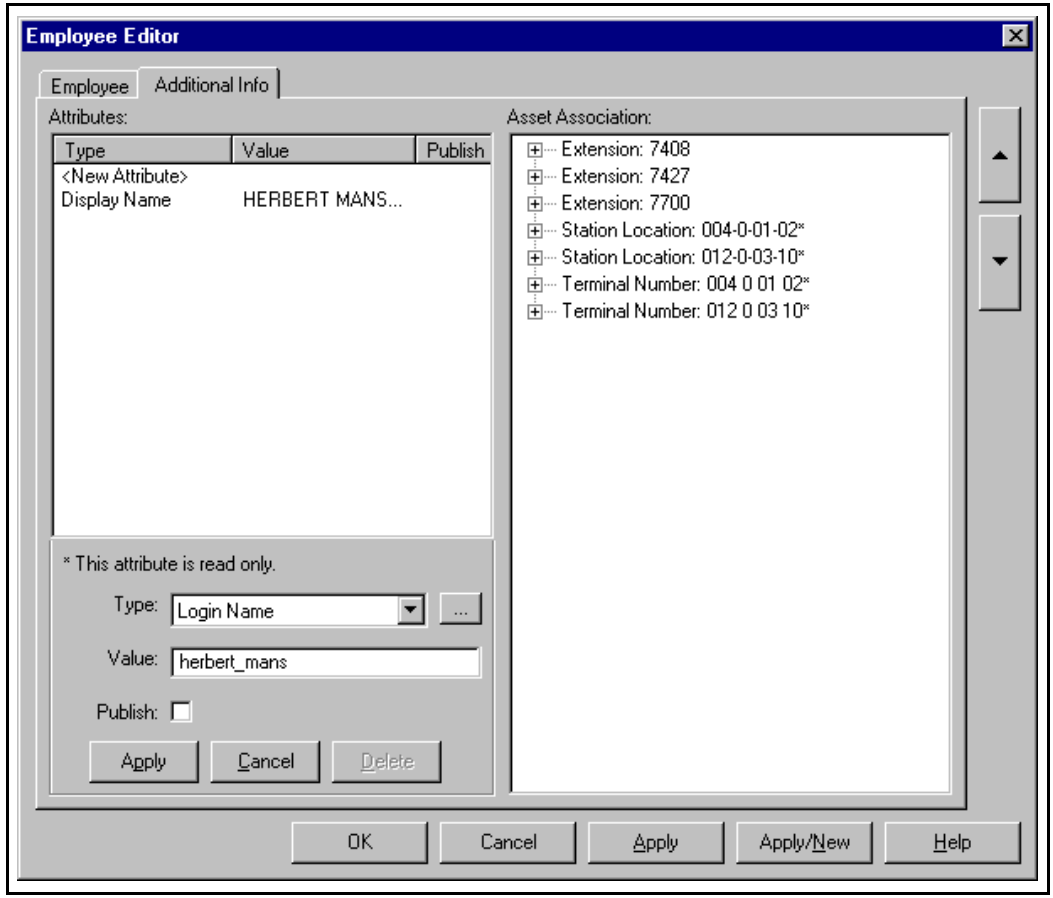
Click one of the following buttons:

- OK - saves the employee information and closes the window.
- Apply - applies the information configured
- Apply/New - saves the employee information and leaves the window open. The window is blank so you can add another new employee.
- Cancel - Closes the window without saving the employee information.
- Help - accesses the online Help system

Enable web desktop end user access

1 Click the Additional Info tab in the Employee Editor window. See Figure 46.

Figure 46
Entering Login Name attribute



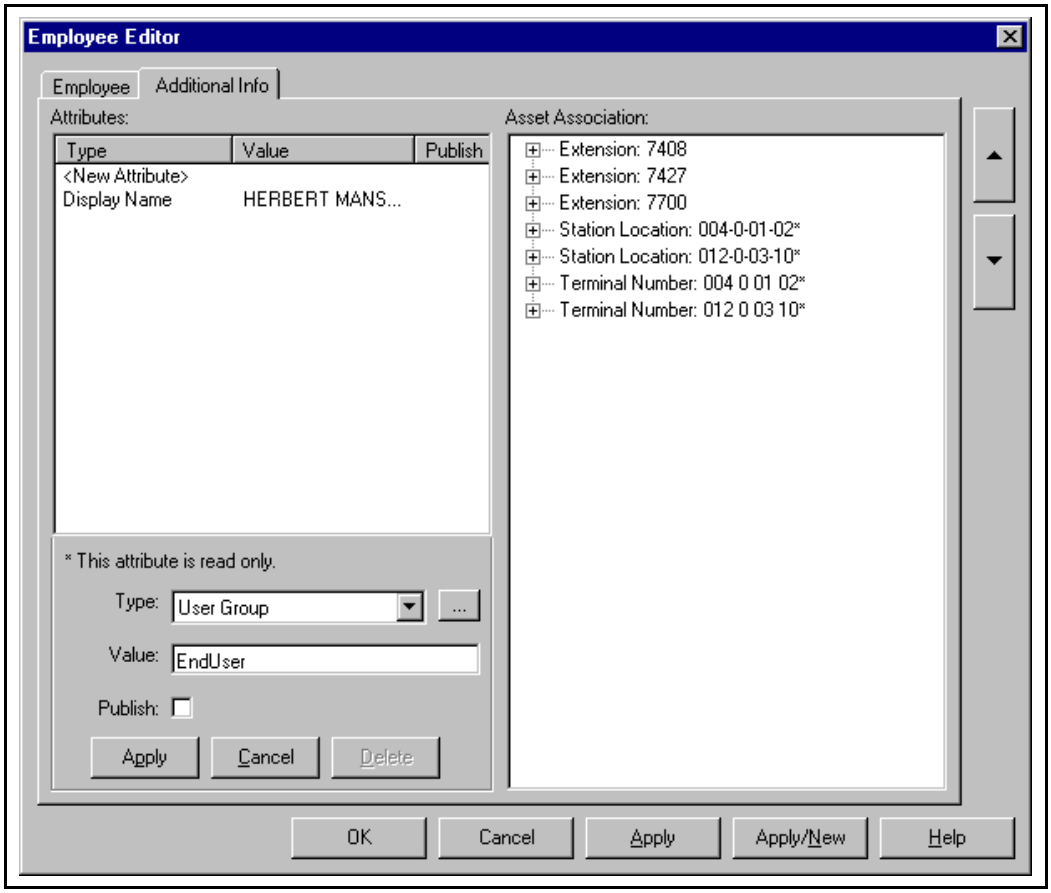
2 Select **Login Name** for the attribute **Type.**

3 Enter the user's Windows NT Login Name for the attribute **Value** (If NT is the authentication method chosen for desktop users).

4 Check the **Publish** check box to enable synchronization with an optional LDAP compliant server.

5 Select **User Group** for the attribute **Type**. See Figure 47.

Figure 47
Entering User Group attribute



6 Enter **"EndUser"** for the attribute **Value** to enable web desktop user access - both for LDAP and Windows NT access.

Edit employee data

To edit employee data:

1 Click the Employee tab in the Employee Editor window. The selected employee data displays.

2 Edit the employee data as follows:

- Edit the employee information in the appropriate fields.
- How you access the Employee Editor determines if the Org. Path field shows a drop down selection box or not. If the drop down is active, the organization structure tree displays. Select the organization node for the employee from the tree. If the drop down box is not active, type the path to the organization node for the employee.
- The Manager field has a drop down box where you select the employee's manager.
- Click the envelop icon next to the Email field to automatically enter the employee's default email address or type the email address.
- Click the Publish check box to share the employee information. Do not click the check box if the information is private.

Click one of the following buttons:

- OK - saves the employee information and closes the window.
- Apply/New - saves the employee information and leaves the window open. The Up and Down arrows appear on the right side of the window. Use these arrows to scroll to another employee record for updating.
- Cancel - Closes the window without saving the employee information.

3 Edit the property information as follows:

- Select the property you want to edit from the list of property in the grid at the right of the window. The edit boxes below the grid display the current values.
- Change the information in the edit boxes. If the property is new, the system automatically checks the Prime field
- Click the Update button.

Delete employee property

To delete property assigned to an employee:

1. Select the property you want to delete from the list of property in the grid at the right of the Employee Editor window.
2. Click the Delete key located below the grid.

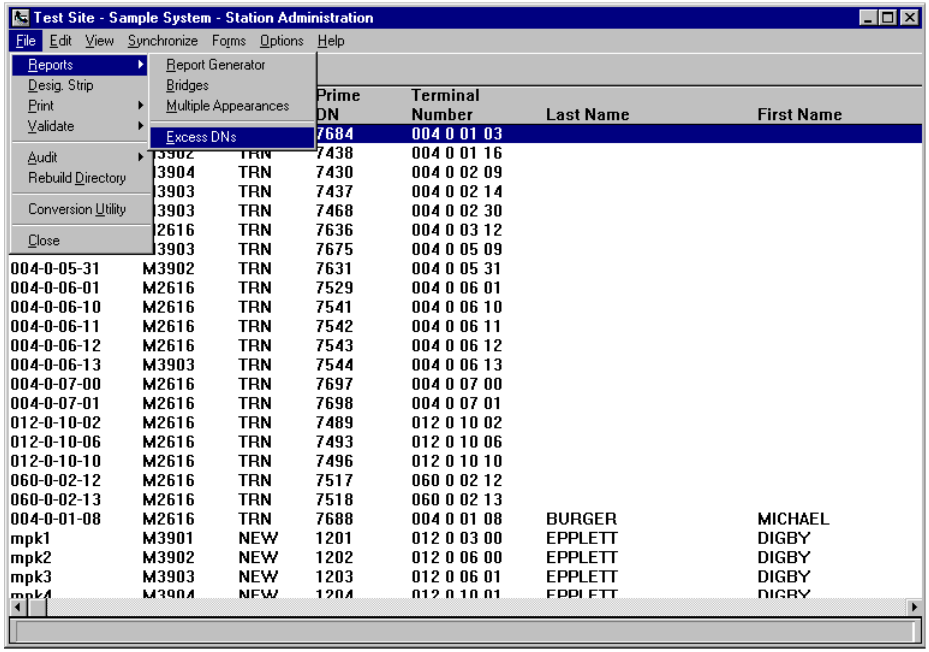
Excess DN report

An employee listing in the Directory lists all the extensions associated with the employee. Normally, each of these extensions would match with a DN in Station Administration. However, when a set (and with it the DN) is deleted from Station Admin, the corresponding entry in the Directory is not removed. The old extensions remain in the Directory to provide information to billing department. Thus there is a possibility that some of the extensions in the Directory do not match with any DNs in Station Admin. These extensions are termed as 'Excess DNs'.

Station Admin has a facility to print off a report which lists these excess DNs against their owner employee.

This report can be run by selecting the **File**->**Reports**->**Excess DNs** menu item in the Station Administration window (Figure 48).

Figure 48
Excess DNs Menu



LDAP Synchronization

The LDAP Synchronization utility synchronizes user data between the OTM Directory, Station Administration data base, and the LDAP directory. LDAP Synchronization is a scheduled activity that runs in the background, or can be performed manually.

In this chapter, LDAP server refers to an external corporate directory that is Lightweight Directory Access Protocol (LDAP) compliant

There are two parts to LDAP synchronization:

- LDAP synchronizations are set up and scheduled from the Utilities menu in the Navigator window.
- When a new user is added to the LDAP compliant external corporate directory, you can manually add the user entry to the OTM directory for the appropriate Meridian 1. Use the LDAP Synchronization menu in the System window.

Before attempting to set up LDAP Synchronization you must know the address of the LDAP server, and also values for the **Search Root**, **Bind to Server as**, and **Password** boxes. In addition, you must know the server type and attribute names. OTM must be given the ability to write to the LDAP server.

LDAP Synchronization is enabled for OTM Directory entries which are in the “Published” status. Only entries in the LDAP compliant external corporate directory that have matching unique identifiers (UIDs) in the OTM Directory are synchronized. You can manually enter the UIDs in the OTM Directory entries or import them using the procedure outlined in “Import and Export Utilities” on page 93.

To Access the LDAP Setup from the Utility Menu of the OTM Windows Navigator Window

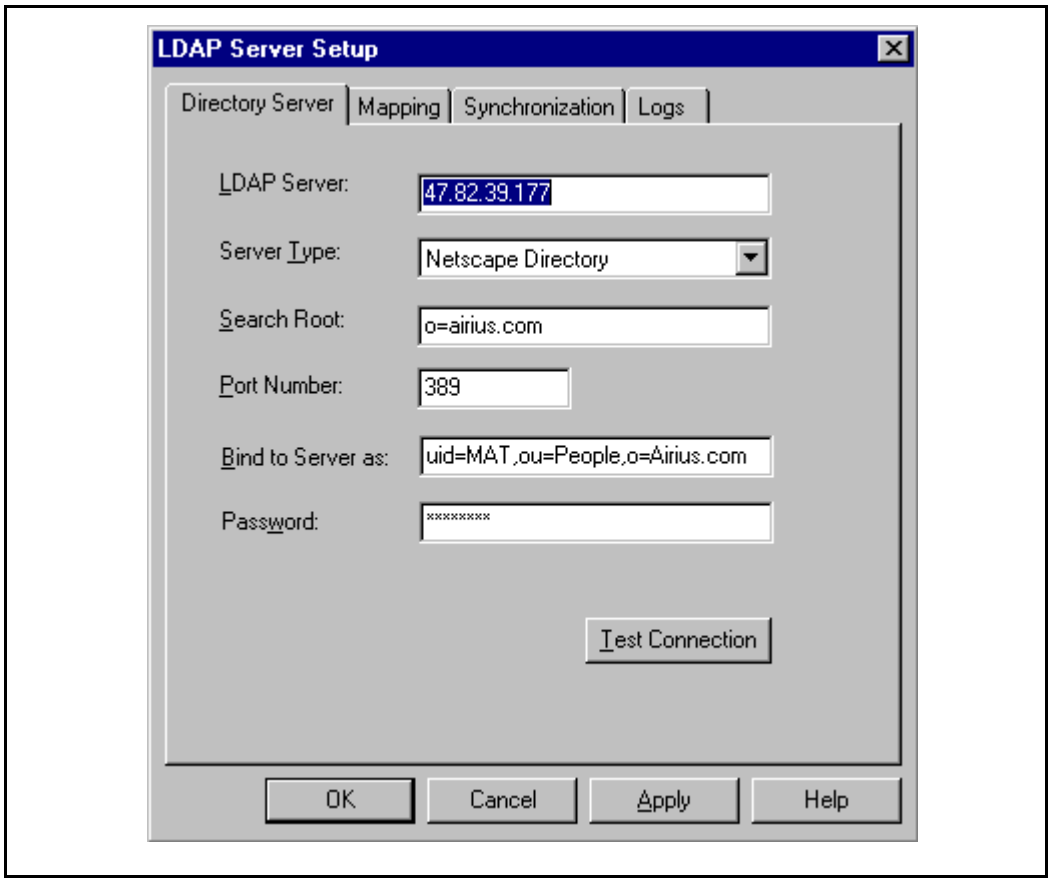
Directory Server tab

The first tab “Directory Server” defines the LDAP Server.

Enter the server information, then click the **Test Connection** button to verify the settings.

> ***Note:*** The Test Connections button currently verifies the LDAP Server address and Port Number only.

Figure 49
Directory Server tab - LDAP Server Setup



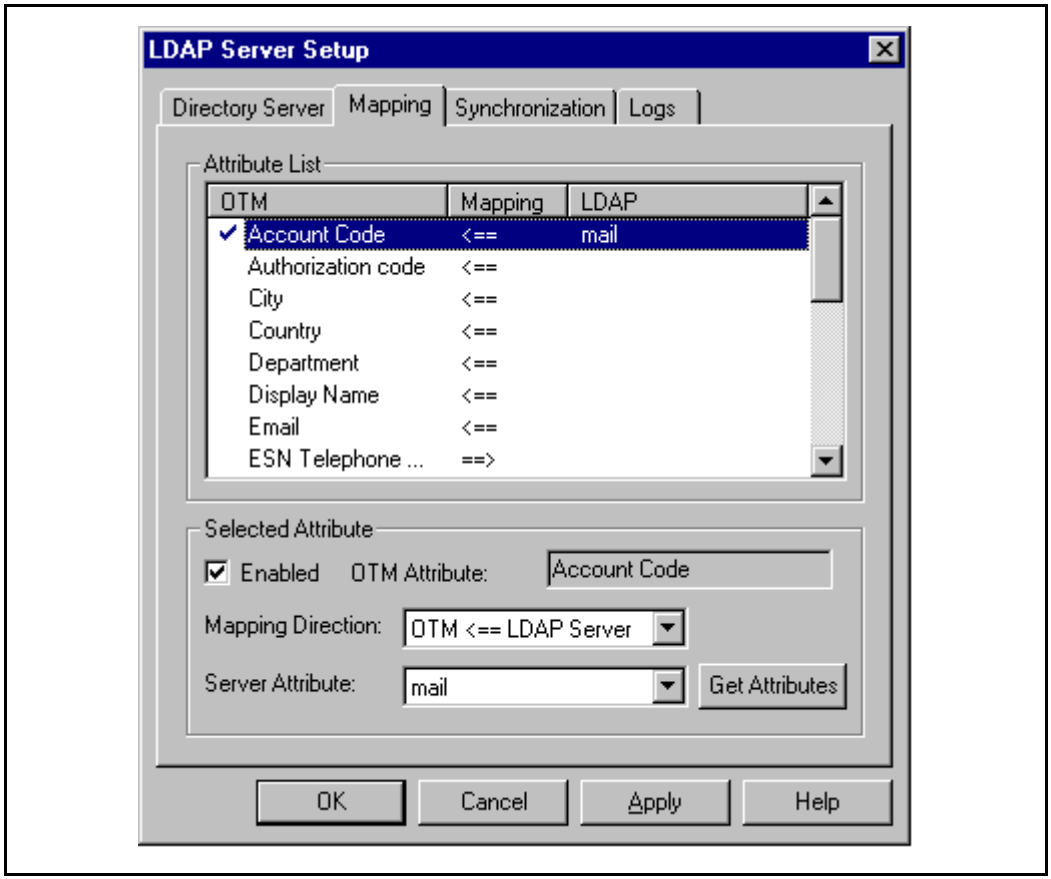
Mapping tab

This tab identifies how the data between the OTM Directory and the LDAP Server is synchronized.

To refresh the displayed attributes on the Server Attribute drop down menu, highlight one item from the Attribute List and then press the 'Get Attributes' button. To map individual data items, click on the OTM data element in the list, select the mapping direction, and select the associated attribute in the LDAP Server.

Only elements which you enable via the checkbox are synchronized during the scheduled synchronization periods.

Figure 50
Mapping tab - LDAP Server Setup



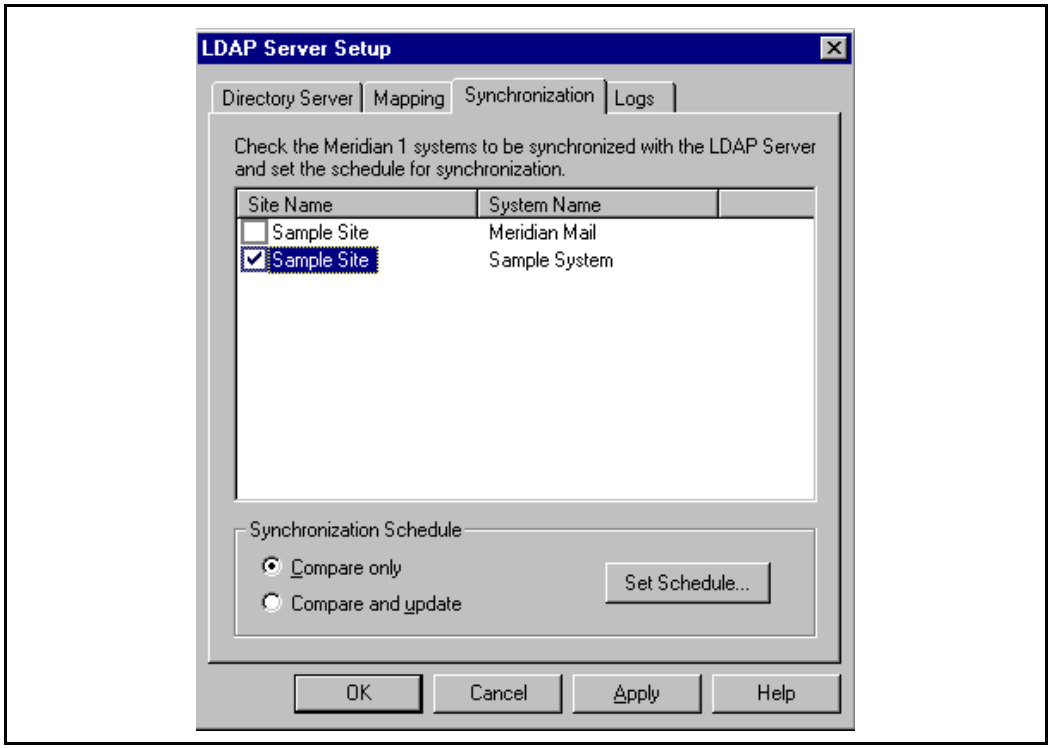
Synchronization tab

Use this tab to schedule the synchronization between the OTM directories and the LDAP Server. The list contains all Meridian 1 systems defined in the OTM Navigator.

Note: Scheduled synchronization will only synchronize OTM Directory entries for which the "Published" attribute has been enabled. Synchronization will also only compare or update entries which have the same "Unique Identifier (UID)" between OTM Directory and the LDAP Server. A UID can be manually set up using the LDAP Synchronization Utility (see page 161) or by using the Import / Export capability (see page 163).

Check the systems to be synchronized and set the schedule. You can select to only compare data, or to actually perform updates.

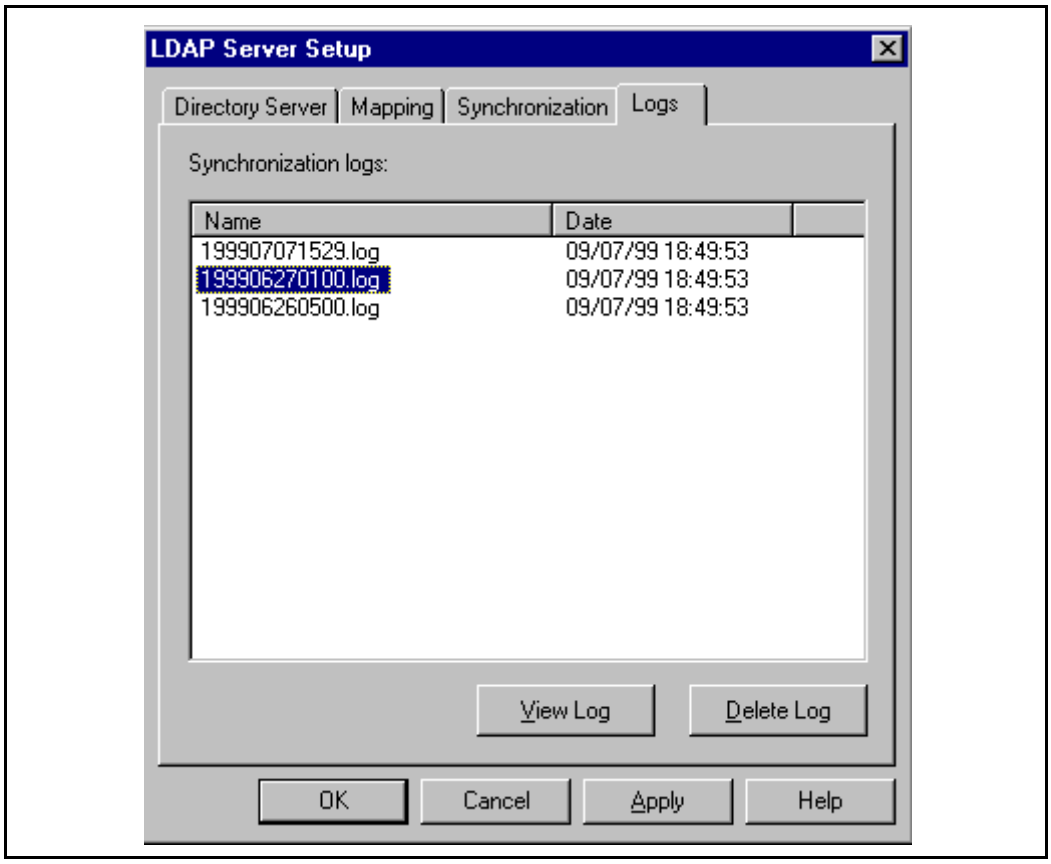
Figure 51
Synchronization tab - LDAP Server Setup



Logs tab

A background routine performs synchronization at the scheduled time, and stores the results in a log in an OTM directory. This tab displays the log files. The user can open a file for viewing, or delete a file.

Figure 52
Logs tab - LDAP Server Setup



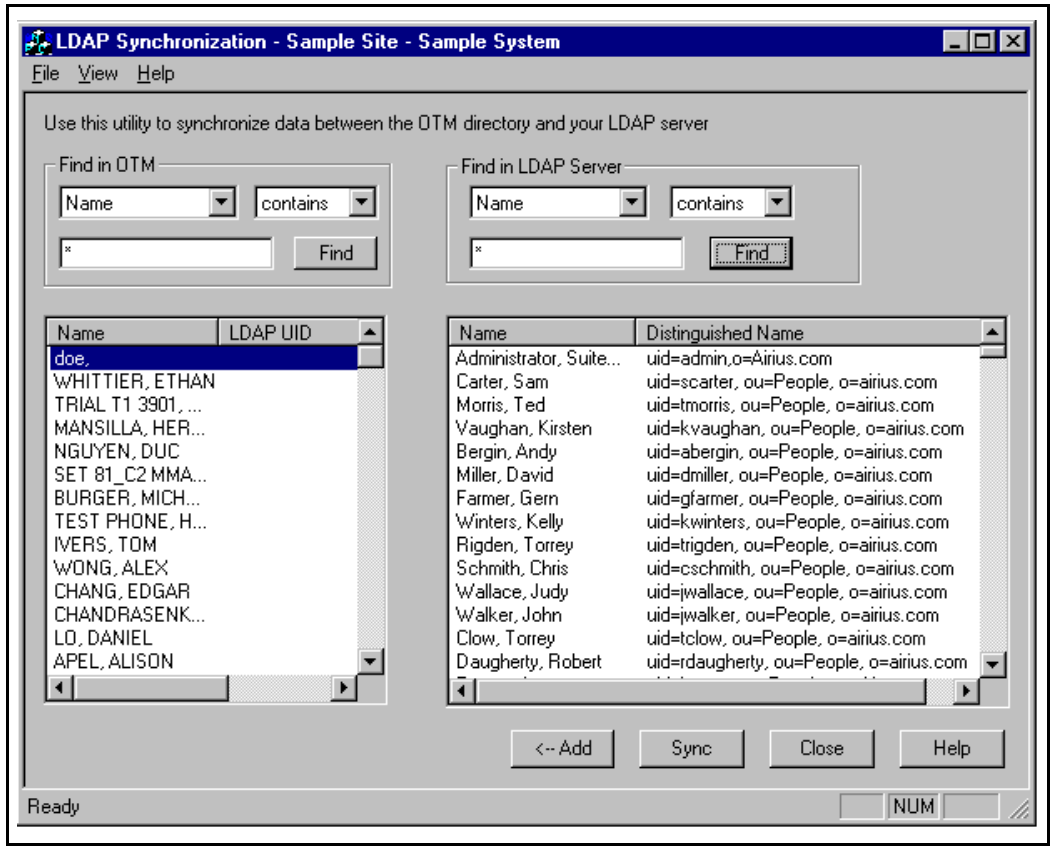
Note: Synchronization results can also be viewed from the Web. See "Directory LDAP sync Report page" on page 220.

LDAP Synchronization Utility

You can use this window to manually synchronize data between the LDAP Server and an OTM directory. In doing so, you assign a Unique Identifier (UID) for each OTM Directory Entity. To start the utility, double-click on the LDAP Synchronization icon in the System Window.

You can perform manual synchronization when a new employee is added in the LDAP Server and you want to add the employee data into the appropriate OTM directory.

Figure 53
LDAP Synchronization Utility



OTM fields and LDAP attributes

LDAP attributes are mapped to OTM fields during synchronization (or manually by clicking on the Synch button, or at a scheduled time). The fields are mapped according to the configuration set in the Mapping table (see Figure 50).

When you press the 'Add' Button, the following LDAP attributes are copied to OTM fields.

Table 8:
Mapping table for Adding an Employee

OTM Field	LDAP Attribute
UID	uid
Last Name	sn
First name	givenname
Job Title	title
Manager	manager
Department	department or departmentNumber (for Exchange)
Email	mail
Telephone	*
Fax	*
Street	postalAddress
City	l
State	st
Postal code	postalCode

(* : The Telephone and Fax fields are not copied during the Add process.)

Importing Attributes to OTM Directory

Use the Import/Export Utility to import data from external sources to the OTM Directory. The example that follows shows how to import a UID from an LDAP database to a user with an extension number in OTM Directory. The same method can be used to import a UID using other data such as Manager's Name, E-Mail Address etc.

Importing LDAP ID (UID) Using an Entity's Extension Number (DN)

In the following example, the LDAP ID of a user (Alex Wong) is imported using his extension number (7409).

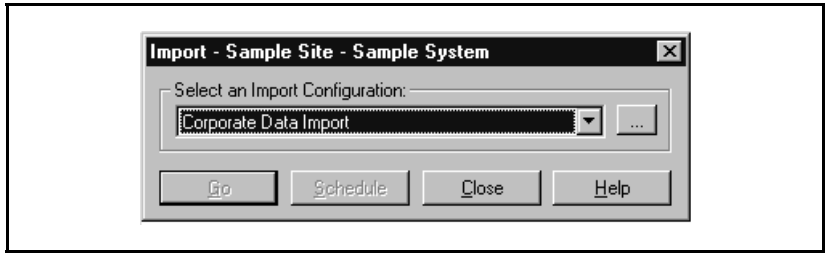
> ***Note:*** The entity should be the prime owner of the extension for this import to be successful.

1 Create a text file that maps the extension number of the entity to his/her uid. The first row should state the name of the column: in this case column 1 is Extension and column 2 is the UID. More records can be added to the file. In this example, the file is named C:\extuidmap.txt, and contains the following text:

```
"Extension", "UID"
7409, wongldapid
```

2 Launch the Import/Export system. This can be launched from a number of applications, e.g. Telecom Billing System (TBS). The Import Configuration dialog is displayed (Figure 54).

Figure 54
Import configuration dialog box



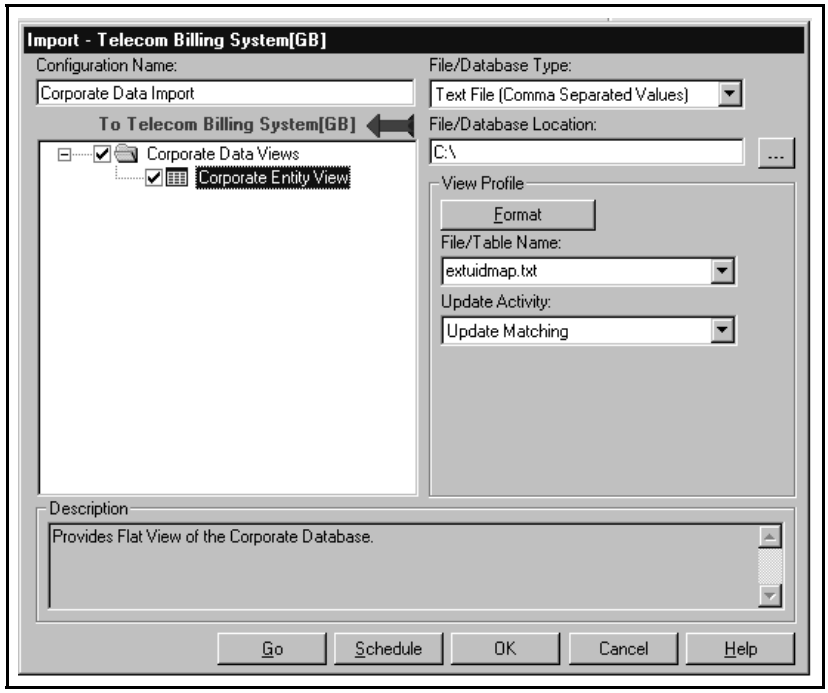
a Select "Corporate Data Import" from the drop down list of types of Import Configuration.

b Click on the ellipse button to launch the configuration.

3 In the resulting dialog, select the file from which you want to import data. In this case, this is the text file created in Step 1. Then press the **Edit** button.

4 In the Import dialog box (Figure 55), select Corporate Data Views and check the Corporate Entity View item.

Figure 55
Import dialog box



5 Select Text File (Comma Separated Values) from the drop down list of available File/Database Types.

6 Select the File/Database Location. In this example, the file created is stored in C:\.

7 Select the File/Table Name. In this example, this file is called extuidmap.txt.

Select Update Matching as the Update Activity. This indicates that only records satisfying the search criteria will be updated.

8 Click on the Format button to launch the format dialog to set the mappings.

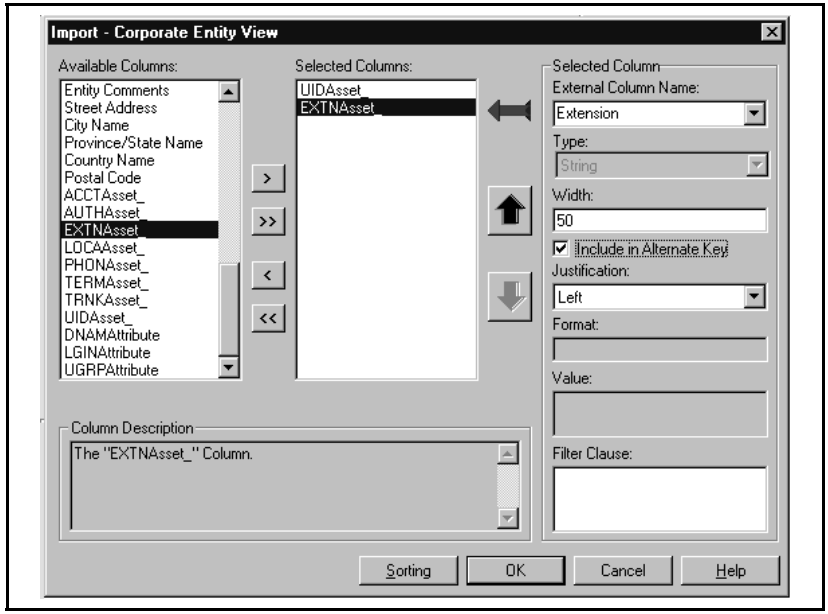
The next step in the procedure is to map the extension and UID fields in the corporate directory to the correct columns in the text file.

9 Using the left double arrow button, clear the Selected Columns list.

10 Select the Extension Field by clicking on the EXTNAsset_ in the Available Columns List and then clicking on the right arrow button. This is the field in the corporate directory.

11 To map this field to the column in the text file that was created, select the proper External Column Name. In this example, the first column in the text file was called "Extension" (as shown in Figure 56).

Figure 56
Mapping extensions and UID field to Corporate Directory

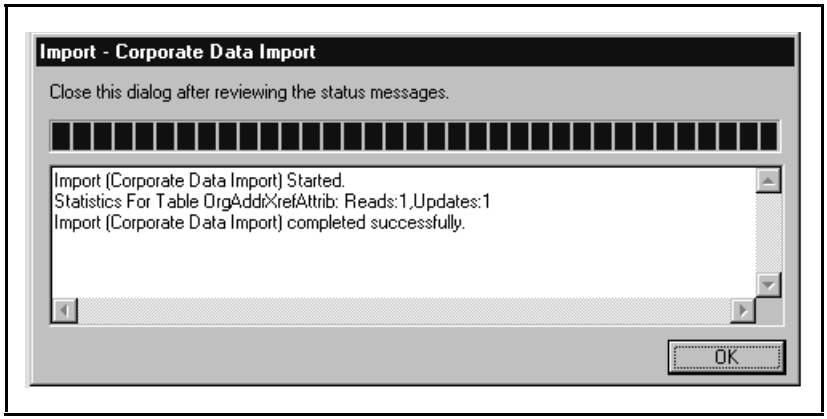


12 Ensure to check the Include in Alternate Key check box. This means that the extension will be used as the search criteria. The system will add the LDAP ID to the entity owning this extension (i.e. the Prime Owner).

13 Using the same procedure, select the UIDAsset_ and map it to the "UID" external column. However, ensure not to check the Include in Alternate Key check box for this field.

14 Click on OK to close the format dialog and begin the Import. Click on the GO button in the configuration dialog (as shown in Figure 54). When the import is completed, the Corporate Data Import summary dialog box is displayed (Figure 57).

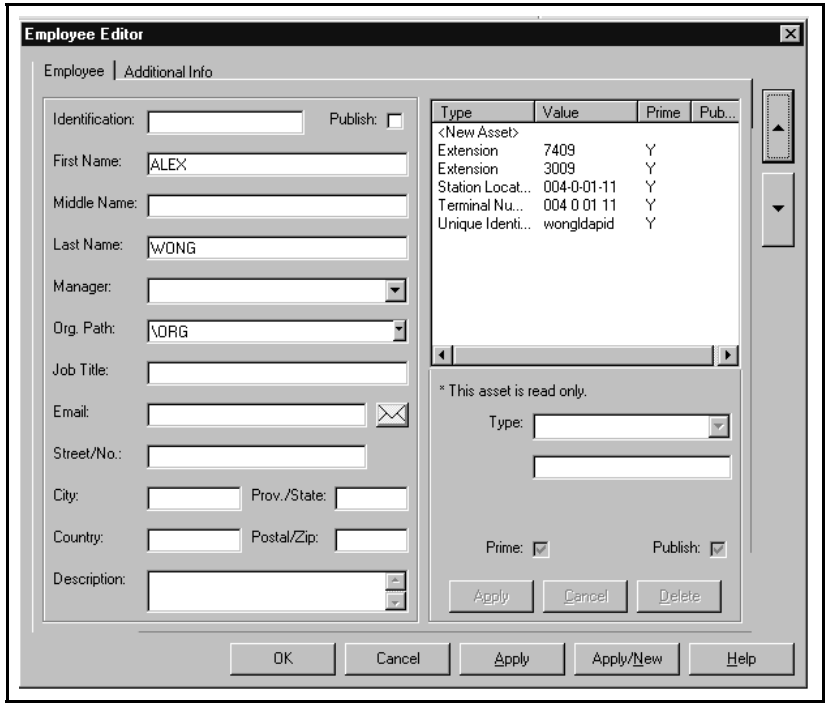
Figure 57
Corporate Data Import summary


Import - Corporate Data Import
Close this dialog after reviewing the status messages.
Import (Corporate Data Import) Started.
Statistics For Table OrgAddiXrefAttrib: Reads:1,Updates:1
Import (Corporate Data Import) completed successfully.
OK

Here, we can see that one record was read in and one record was updated.

15 The last step is to verify if the LDAP ID was added into the Corporate Directory. To do this, launch the Corporate Directory Editor. Click on the LDAP Synchronization icon, initiate a 'Find in OTM, and the Employee Record. The Employee Editor confirms that the LDAP Unique ID for this user (wonglapid) is listed (Figure 58).

Figure 58
Employee Editor dialog box



Electronic Data Dump

OTM's Electronic Data Dump (EDD) is a critical data base update operation on the Meridian 1 switch. This operation dumps (saves) modified data from the switch's resident memory to data base files on the switch's hard disk. These data base files contain the active configuration information for phone-system terminals and users.

Synchronizing and securing data

Using OTM's Station Administration and ESN applications, you can modify station data, Call Party Name Display (CPND) data, and Electronic Switched Network (ESN) data. OTM stores these changes in its PC data base files. The phone system cannot recognize these changes, however, until you upload the modified data to the Meridian switch. This operation synchronizes switch data with current OTM data on the PC.

Updating the switch's data is a two-step process. The first step is to transmit modified OTM data from the PC to the switch's resident memory. OTM's Station Administration and ESN applications include a **Synchronize** menu for this purpose. The second step is to use OTM's EDD feature to dump modified data from the switch's resident memory to the switch's hard disk.

To secure modified data at the switch, you must dump it to the switch's hard disk. Optionally, your distributor technician can set up the switch so that you also dump data to a diskette that you insert in the switch's floppy drive. Power interruptions erase all data in resident memory. When power is restored, switch data is automatically restored from its data base files on the hard disk. Modified data that was *not* previously dumped to these data base files is lost at the switch. Further, this data may be difficult to isolate in the PC's OTM applications, since *all* previously uploaded data shares the same TRN (transmitted*)* status. For these reasons, ***always*** perform or schedule data dumps after uploading data to the switch.

Accessing EDD

You can access EDD from the **File** menu of the System window. The EDD selection is called **Data Dump**. This selection has its own submenu with the options **Now**, **Schedule**, and **View Log**.

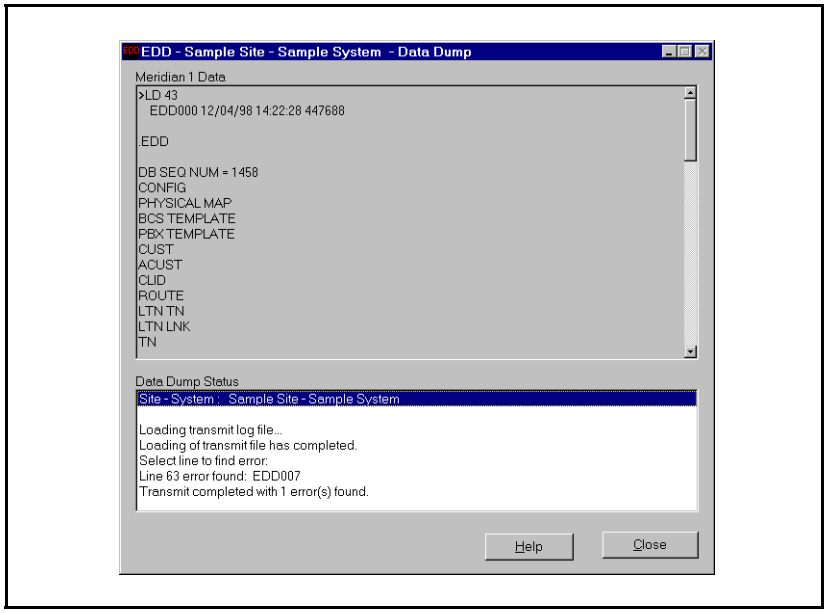
You can select **Now** to perform the data dump immediately, **Schedule** to set up the operation to run automatically, or **View Log** to review status and error information from the most recent data dump.

The data-dump operation takes just a few minutes. While modified OTM data is being dumped at the switch, status and error information about the data dump is actively logged to the PC. Both **Now** and **View Log** open the EDD Data Dump dialog box for viewing or reviewing, respectively, this status and error information. This log is saved to the PC's hard disk and each data dump overwrites the existing log file.

> ***Note:*** To access error information, open the Events window after the data dump and double-click each error event of interest. This invokes help that is specific to each error.

The **Schedule** option opens the Scheduling dialog box. Here you can select when and how often you want to dump data at the switch. It is best to schedule this operation for a time soon after uploading OTM data to the switch. The OTM Scheduler sends the job to the Queue Manager at the designated time.

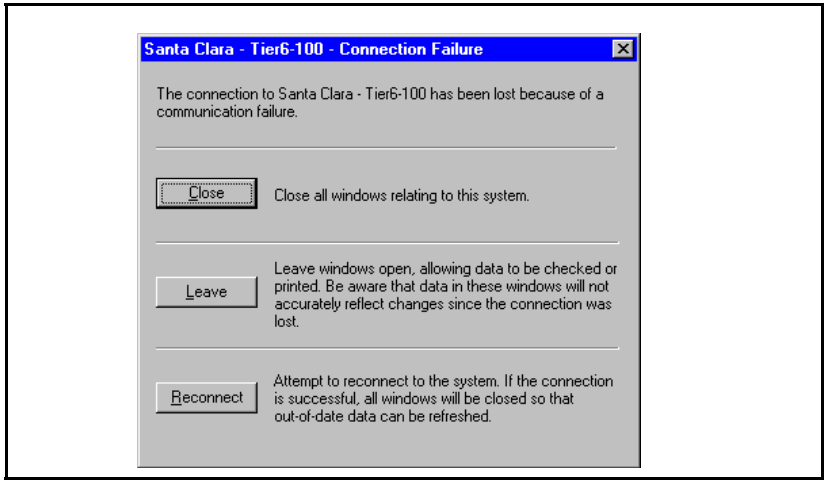
Figure 59
EDD Data Dump dialog box



Responding to a connection failure

If you are connected to M1 system and that connection fails, a warning message appears. See Figure 60. You are given the following options:

Figure 60
Connection Failure dialog


Santa Clara - Tier6-100 - Connection Failure
The connection to Santa Clara - Tier6-100 has been lost because of a communication failure.
Close
Close all windows relating to this system.
Leave
Leave windows open, allowing data to be checked or printed. Be aware that data in these windows will not accurately reflect changes since the connection was lost.
Reconnect
Attempt to reconnect to the system. If the connection is successful, all windows will be closed so that out-of-date data can be refreshed.

- Close all system windows and reconnect to the system
- Leave the system windows open so that you can copy or print any or all of the following information:
  - — Command results in the System Terminal window or any open Maintenance window.
  - — Alarms or events in the System Event Log.
  - — Maintenance window objects, such as network loops within the Network Loops window.

  Note: When you have finished printing the desired information, close the system window and reconnect to the system.
- Attempt to reconnect to the system.

Event Log Viewer

This chapter contains a general overview of the Event Log Viewer. It describes its functions and purpose. For complete details on how to use the Event Log Viewer, refer to the online Help.

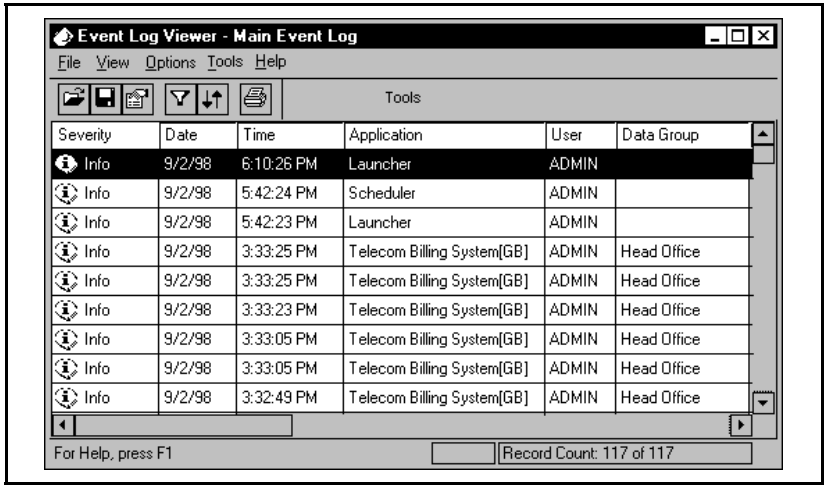
Overview

Use the Event Log Viewer to view the records of all operations that are run from the Optivity Telephony Manager. The Event Log Viewer displays the event records stored in the Event Log. The Event Log Viewer also has features such as event sorting and filtering.

Interface

Select **Event Log Viewer** from the **Maintenance** menu of the OTM Navigator window. The main window of the Event Log Viewer displays the Event Log data in a report layout. Column headings display text describing the meaning of the data it contains. You can change the size of columns by dragging on the divisions that separate the each headings.

Figure 61
Event Log Viewer window


Event Log Viewer - Main Event Log
File View Options Tools Help
Tools
Severity Date Time Application User Data Group
Info 9/2/98 6:10:26 PM Launcher ADMIN
Info 9/2/98 5:42:24 PM Scheduler ADMIN
Info 9/2/98 5:42:23 PM Launcher ADMIN
Info 9/2/98 3:33:25 PM Telecom Billing System[GB] ADMIN Head Office
Info 9/2/98 3:33:25 PM Telecom Billing System[GB] ADMIN Head Office
Info 9/2/98 3:33:23 PM Telecom Billing System[GB] ADMIN Head Office
Info 9/2/98 3:33:05 PM Telecom Billing System[GB] ADMIN Head Office
Info 9/2/98 3:33:05 PM Telecom Billing System[GB] ADMIN Head Office
Info 9/2/98 3:32:49 PM Telecom Billing System[GB] ADMIN Head Office
For Help, press F1
Record Count: 117 of 117

File menu

The File menu contains commands to open and close Event Logs, print Event Log reports, and maintain the Main Event Log.

View menu

The View menu commands allow you to change the way you view an Event Log .

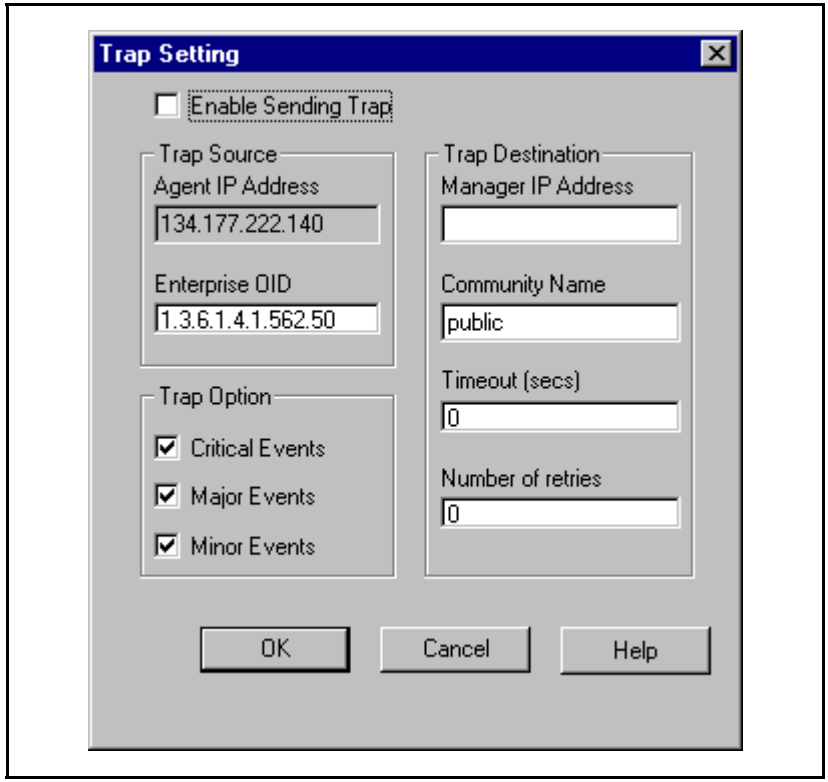
Options menu

The Options menu allows you to save the settings you entered in the File and View menus.

Tools menu

The Tools menu allows you to access the SNMP Trap Setting window (Figure 62).

Figure 62
SNMP Trap Window



The Trap Setting option enables SNMP Trap Setting and contains the following options:

Trap Source

Agent IP Address: An agent is an SNMP entity located on the managed node. The Agent IP Address is the IP address of the agent entity (i.e., the machine sending the trap).

Enterprise OID: The Enterprise OID is a unique value assigned to your organization by the Internet Assigned Number Authority (IANA).

Trap Destination:

Manager IP Address: The Manager IP Address is the IP address of the PC that hosts the target SNMP Manager and receives the trap.

Community Name: This name identifies the community string. The default name is "Public".

Timeout: The Timeout value is a time interval in milliseconds and determines the length of time that applications wait for an SNMP agent entity to respond to a request.

Number of Retries: The number of times the system will attempt to connect to the SNMP Manager.

Trap Option:

Critical Events: This error indicates that the event resulted in a loss of data or system functionality.

Major Events: This error indicates the termination of a process that could result in other processes being terminated (e.g., a corrupt DLL).

Minor Events: This error indicates that the event wasn't necessarily significant but might point to possible future problems.

System Terminal

System Terminal helps you perform overlay-based tasks directly through the Meridian 1 TTY interface. System Terminal provides online, context sensitive help for overlays, prompts, and error messages. System Terminal also provides a terminal emulation capability.

In the web environment, Terminal Client provides the same functionality as System Terminal. For information on Web System Terminal, see “OTM Web System Terminal” on page 236.

There are two versions of System Terminal to support two different connection types—Ethernet or PPP and Serial—as follows:

- Overlay Passthru is available on X11 release 22 and later systems connected to OTM using Ethernet or PPP. Overlay Passthru only supports access to the overlays.
- VT220 provides similar functions for any Meridian 1 system using serial connections, as well as terminal emulation for all application modules (such as Meridian Mail). VT220 is discussed in “VT220” on page 189.

In release 22 and later switches, you access the overlays using the System Terminal (Ethernet or PPP required) and access the application modules via VT220. In pre-release 22 switches, you access both the overlays and application modules via VT220.

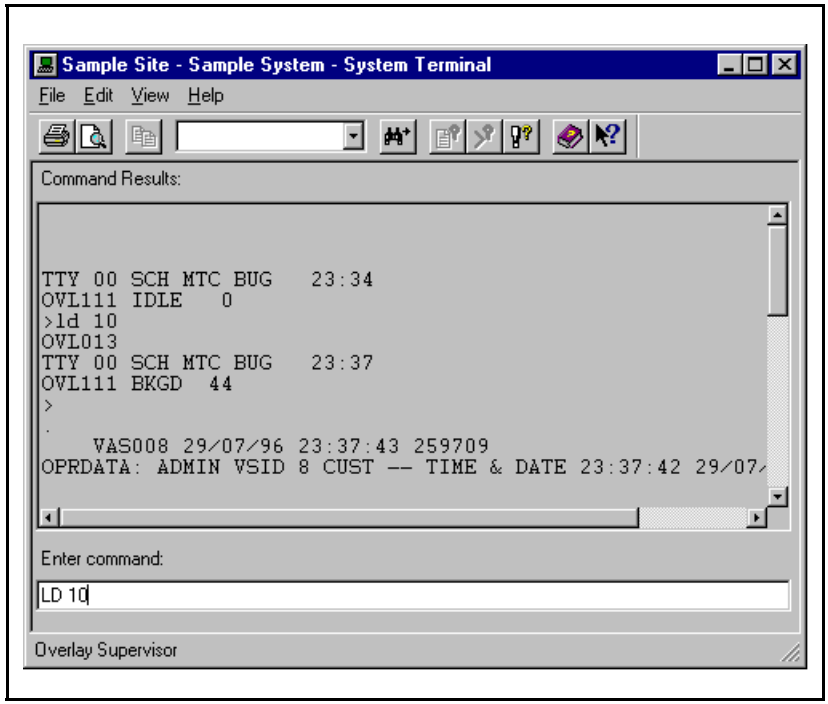
Launching System Terminal (Ethernet or PPP required)

Once you connect to the system of interest, to launch System Terminal:

1 Select **System Terminal** from the **Maintenance** menu or toolbar in the System window.

2 Enter your system user ID and password in the System Login dialog. Figure 63 shows the System Terminal window.

Figure 63
System Terminal window



The System Terminal window displays all system events as they occur. It also gives you direct access to any overlay.

Note 1: For Ethernet or PPP connections, each active System Terminal connection requires a pseudo-TTY (PTY) port. PTYs are software-only I/O ports. The System Terminal and Maintenance Windows applications use these ports to access the overlays.

Note 2: Ethernet and PPP are available only for X11 Software Release 22 and above with packages 296 and 243 equipped.

OTM System Terminal window

The System Terminal window includes the following:

- An **Enter Command** edit box in which you type overlay commands
- A **Command Results** list box that displays your interaction with the overlays and the results
- Links to online help are available for the following:
  - — Help on the current overlay
  - — Help on the current prompt
  - — Help on the last or selected error message
  - — One-line description of prompts in the status bar

You use overlays just as you did before OTM was available. The one minor difference is that you type into an edit box rather than the last line of the screen as with TTY and Terminal Emulation applications. You still use the **<Enter>** key to send the typed-in data (an overlay command or response to a prompt).

Using System Terminal

You can do the following from System Terminal:

- load an overlay as you normally would on a TTY or Terminal Emulation application
- cut or copy system events or overlay command results to the clipboard
- save or capture the command results to a file
- get help on a Meridian 1 error message
- get help on an overlay
- get help on a prompt
- monitor system events

Advantages over a TTY

You now have the following advantages over the old TTY:

- you can type in lower case and use the backspace key
- **Copy** and **Paste** in the **Enter** Command box (useful for repeated commands with only a TN change)
- scroll back in the command results
- **Copy** and **Print** the command results
- capture output to a file as well as to the screen
- **Save** the command results to a file

Getting help on the current overlay

You can get more help on the currently loaded overlay using the **Current Overlay** command in the **Help** menu. The help file is organized in a similar fashion to the *I/O Guide*.

> ***Note:*** The **Current Overlay** button or menu item is disabled when you are not in an overlay.

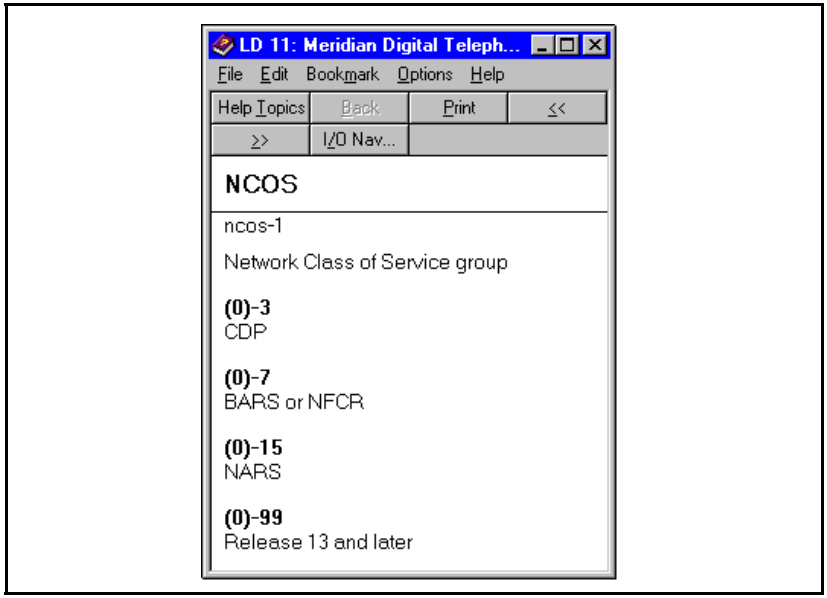
Example

If you are in overlay 10, you can select **Current Overlay** from the **Help** menu, and then navigate within help to the **CPND** prompt sequence. You can click on any prompt in the sequence. This displays the help window for that prompt—the same as help on **Current Prompt**.

Getting help on the current prompt

Figure 64 shows an example of the help you can get on an administration overlay. You load the overlay and respond to the prompts, one at a time. This help guides you as you load the overlay and respond to the prompts.

Figure 64
Current prompt help example



If an overlay is currently loaded, the Status Bar at the bottom of the window provides a short description of the current prompt.

If the one-line description is not enough, you can read a full description of the prompt in OTM Windows Navigator Help. Choose **Current Prompt** from the Help menu.

> ***Note:*** Help on the current prompt is disabled if you are not in an administration overlay.

To get help on any other prompt choose **I/O Navigator** from the Help menu.

Getting help on an error message

System Terminal can distinguish error messages from the other text in the **Command Results** list box. The **Error Message** command in the **Help** menu provides the error description in OTM Windows Navigator Help.

You can get help on an error message in the following ways:

- double-click an error message anywhere in the Command Results
- select the **Error message** command in the **Help** menu to get help on the last error message (even if it is scrolled off the screen)
- select an error message anywhere in the Command Results, then select the **Error message** command in the **Help** menu
- select the **I/O Navigator** from the **Help** menu

The error message help window appears when you select the **Error message** command in the **Help** menu**.**

> ***Note:*** You can also get help on Meridian Mail System Error and Event Reporting (SEER) messages using the I/O Navigator.

System Terminal menus

Detailed descriptions about the functions of each command in the System Terminal menus are available by clicking the "Context-sensitive Help" button in the toolbar. System Terminal menus consist of:

- File
- Edit
- View
- Help

Toolbar

The System Terminal toolbar offers several useful shortcuts to the menu commands. See Figure 65.

Figure 65
System Terminal toolbar

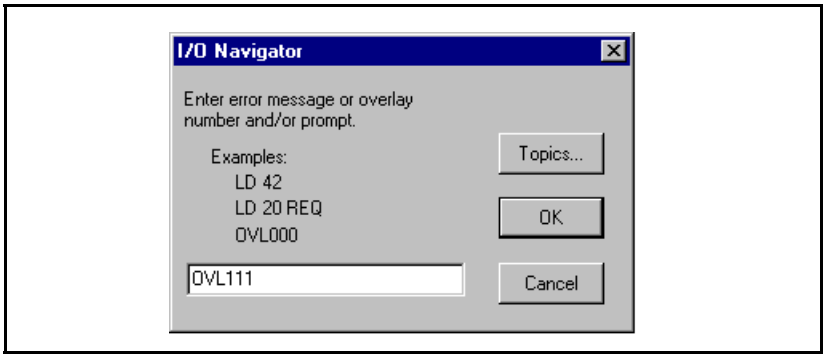
Note: The **Find** and **Find Next** icons in the toolbar allow you to search the Command Results for the text string that you enter in the **Find box**. **Find** is case-sensitive. The search begins at the current location.

Using the I/O Navigator

The I/O Navigator displays a dialog box that allows you to quickly jump to help on any overlay, prompt, command, or error message. Select **I/O Navigator** from the overlay's **Help** menu or from the **I/O Navigator** buttons in the appropriate Help files.

The I/O Navigator allows you to navigate through I/O reference help independent of your current context within the overlays. For example, you do not need to be logged into a system to look up an error message using the I/O Navigator. See Figure 66.

Figure 66
I/O Navigator dialog



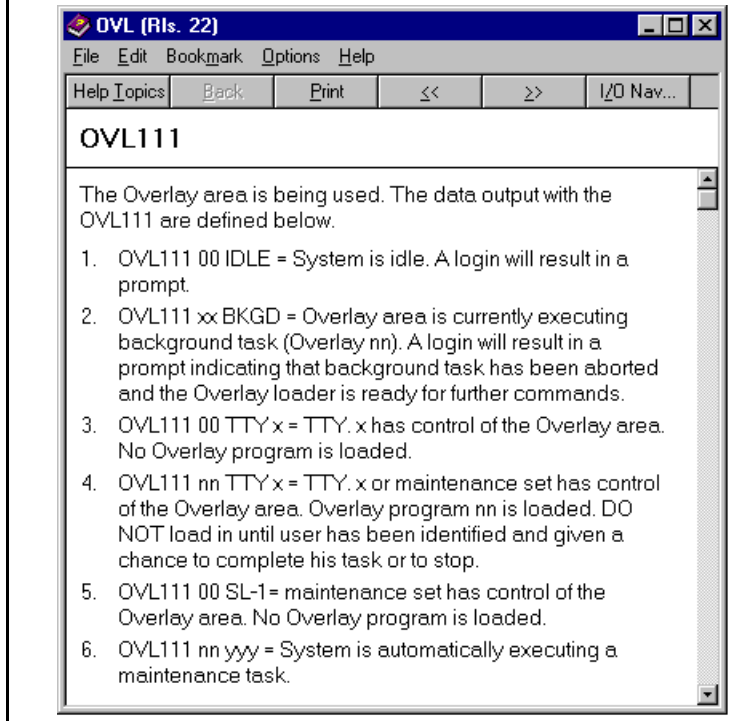
1 Type the overlay number, error message number, or prompt in the text entry field

2 Click **OK**.

Help information for the specified overlay, prompt, or error message appears.

The **Topics** button displays the general reference Help index. See Figure 67.

Figure 67
Example Help Index for an error message


OVL (Rls. 22)
File Edit Bookmark Options Help
Help Topics Back Print << >> I/O Nav...
OVL111
The Overlay area is being used. The data output with the OVL111 are defined below.
1. OVL111 00 IDLE = System is idle. A login will result in a prompt.
2. OVL111 xx BKGD = Overlay area is currently executing background task (Overlay nn). A login will result in a prompt indicating that background task has been aborted and the Overlay loader is ready for further commands.
3. OVL111 00 TTY x = TTY. x has control of the Overlay area. No Overlay program is loaded.
4. OVL111 nn TTY x = TTY. x or maintenance set has control of the Overlay area. Overlay program nn is loaded. DO NOT load in until user has been identified and given a chance to complete his task or to stop.
5. OVL111 00 SL-1 = maintenance set has control of the Overlay area. No Overlay program is loaded.
6. OVL111 nn yyy = System is automatically executing a maintenance task.

The **Cancel** button cancels a search.

Entering an overlay (LD XX) or error code mnemonic (ERR, BUG) takes you to the contents page of the appropriate help file. Entering the error code (BUG3001) or an LD number and a prompt takes you to the Help topic page.

- If the prompt or error message you specify does not exist, the help search dialog appears with the nearest match selected.
- If the overlay number or error message type do not exist, a "Help file not found" information dialog appears.
- The **I/O Navigator** command can be used from within Help. You do not need to be connected to a switch.
- There are some combination overlays (for example, one help file describes two overlays). You can enter either of the overlay numbers. These cases are:
  - LD 36 and LD 41
  - LD 40 and LD 42
  - LD 20, LD 21, and LD 22
  - LD 84 and LD 85
- Leading zeros are not required in error messages. For example, entering SCH22 or SCH022 will find the description for SCH0022.
- To look up Meridian Mail System Error and Event Reporting (SEER) messages, enter XXXYY (where XXX is the message class, and YY is the message number—no mnemonic is required). For example, enter 11102.

VT220

The VT220 application models the VT100/220/320 series of terminals to set up communications between your PC and the Meridian 1. With VT220, you can connect to the Meridian 1 using a serial, PPP (point to point protocol), or Ethernet connection. It supports the transfer of ASCII data during a communications session and provides normal TTY and VT220 access to overlays that are not supported by the OTM applications.

Features

VT220 supports the following features:

- double-height, double-width, blinking, bold and underlined characters
- complete graphic character set, including a special font for representing control characters
- scrolling regions
- 80 and 132 column modes
- echo, no echo, local mode and autowrap on/off
- reverse video characters and reverse video screen
- cursor types—block, underline, vertical line, or none
- selectable cursor blink rate
- user-definable Tab stops
- programmable function keys
- display control mode
- national character sets

Accessing VT220

Before accessing VT220, you must first select the type of terminal emulation session you require. To do so, perform the following steps:

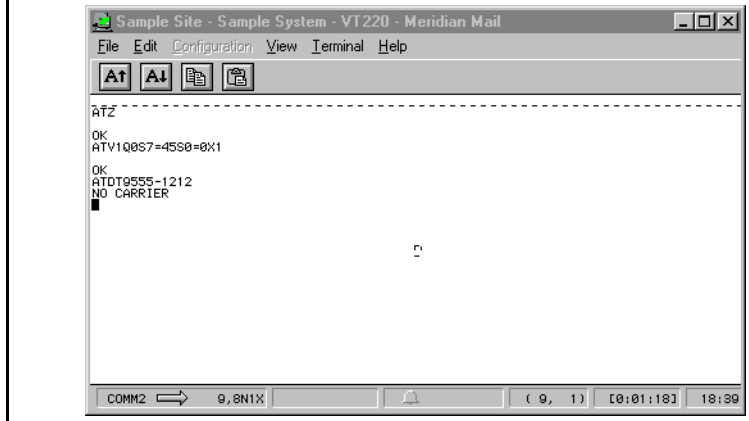
1. Click once on the system name in the OTM Navigator to highlight it and click **Properties** from the File drop-down menu (or simply right-click on the system name and click **Properties**).
2. From the System Properties window, click the **Communications** tab and select the desired settings file from the Terminal Emulation VT220 Settings drop-down list box (e.g., MMAIL.INI).
3. Click the **Applications** tab and click once on **System Terminal (VT220)** in the Applications list box to highlight it.
4. Select a communications profile for System Terminal (VT220) by clicking on the desired profile name in the Communications Profile drop-down list box.
5. Click OK to select these settings and return to the OTM Navigator.

To access VT220, perform the following steps:

1. From the OTM Navigator, select the desired site and system and click **System Terminal** from the Maintenance drop-down menu.
2. From the System Terminal Selection dialog which appears, click **Serial (VT220)** and click **OK**.

VT220 will attempt to connect to the terminal based on the communications criteria entered in the System Properties Serial Communications Profile for this system. Once it establishes this connection, the VT220 main window will appear listing the commands and graphical tools required for the emulation session. See Figure 68.

Figure 68
VT220 window



The following sections briefly list the main functions of VT220.

File menu

The File menu contains functions used to save the VT220 configuration, print the contents of the terminal window, record and replay VT220 terminal emulation sessions and close the system.

The following is a summary of these functions:

- Save Configuration
- Save Configuration As
- Print
- Print Setup

- Printer Fonts
- Capture
- Playback
- Close

The **Save Configuration** and **Save Configuration As** menu items are only available if you have selected a user defined terminal type (as defined as the 'Other' VT220 type from the OTM System Properties Communications tab). Otherwise, they will appear grayed.

Edit menu

The Edit menu contains editing commands used to manipulate the text appearing in the main window.

The following is a summary of these functions:

- Copy
- Paste
- Select All

Configuration menu

Once you start VT220 from the system window of the OTM Navigator with a user defined type of terminal (as defined as the **Other** VT220 type from the OTM System Properties Communications tab), then you can use the Configuration functions to customize the VT220 settings to suit your needs. The purpose of having the 'Other' type is to allow you to create multiple types of settings based on generic settings.

If you do not select 'Other' or a user defined type, then you will not require these functions to run VT220. The Configuration command will therefore appear grayed.

Before you can customize the VT220 settings, you must first select the custom VT220 settings file OTHER.INI using the Communications tab from the OTM Navigator System Properties application. Refer to "Accessing VT220" on page 190 for more details on selecting this option. This file appears in the VT220 settings drop-down list box. When you launch VT220

from this customizable terminal, you can then use the commands which appear in the Configuration drop-down menu to change the settings for VT220.

Once you have edited the VT220 settings using these functions, you must then save the customized configuration file using the **Save Configuration As** command. Using this command, you can enter the name of this configuration file for use in later sessions.

VT220 includes a number of setting files which are predefined depending on the system to which you are connected. For example, M1.INI is a predefined setting file used for a VT220 terminal emulation session with the Meridian 1, and MMAIL.INI is a predefined setting file for Meridian Mail. These setting files provide the required VT220 settings and cannot be edited.

The following is a summary of the Configuration functions:

- Terminal Setup
- National Replacement Character Set
- Map Keyboard
- Program Keys
- Tab Setup
- Options
- Status Bar

View menu

The View menu contains toggles to adjust the display of the VT220 window as well as hide and display the Tool Bar, Status Bar and Keys Window.

The following is a summary of these toggles:

- Terminal
- Hide/Show Tool Bar
- Hide/Show Status Bar
- Hide/Show Keys Window

Terminal menu

The **Terminal** menu contains commands used to connect and disconnect VT220 for a temporary communications setup. The **Connect** and **Disconnect** commands start and stop the terminal emulation. The **Temporary Communication Setup** function temporarily creates a terminal emulation session based on customizable connection criteria. This setup is only temporary for the current session. When you access VT220 again, it will use the criteria defined for this system in the OTM **System Configuration** function.

The following is a summary of these commands:

- Connect
- Disconnect
- Temporary Communication Setup

Help menu

In addition to the standard online help features for VT220, this **Help** menu contains topics which provide help with the Overlay Enhancer and I/O error messages.

The following is a summary of these Help items:

- Help Topics
- Current Overlay
- Current Prompt
- Error Message
- I/O Navigator
- About VT220

The **Help Topics** menu item displays the help topics for VT220 only if you select a user defined terminal type (as defined as the 'Other' VT220 type from the OTM system Properties Communications tab). Otherwise, it will display the help topics for the Meridian 1 system.

The **Current Overlay**, **Current Prompt** and **Error Message** menu items are only enabled if you are running a VT220 terminal emulation for the M1.INI terminal type and the system is in overlay mode.

The I/O Navigator **Help** function allows you to obtain information on specific error messages.

The **Overlay Enhancer** is an online context sensitive help function which allows you to obtain quick and direct access to overlay information while in an active terminal session with the Meridian 1.

The following Overlay Enhancer Help commands appear in the Help drop-down menu:

- Current Overlay
- Current Prompt
- Error Message

The **Current Overlay** and **Current Prompt** commands are only available if an overlay program is loaded and the terminal session is of type 'Meridian 1', 'PPP', or 'Ethernet'. Otherwise, they will be disabled and will appear grayed. The **Error Message** command will be available if the terminal session is of type 'Meridian 1', 'PPP', or 'Ethernet'. Otherwise, it will be disabled and will appear grayed.

> ***Note:*** Selecting an error message in the VT220 window is not sufficient to access the Overlay Enhancer help. Unlike the Overlay Passthru application which displays online help when you double-click the error message, the VT220 help requires that you first double-click the error message and then click **Error Message** from the Help drop-down menu. This will then display help for the selected error message

Keyboard mappings

VT220 uses standard keyboard mappings which, when incorporated into a terminal session, will match the appropriate VT keys and actions. These default mappings, as shown in the following tables, allow you to run a terminal emulation session using the appropriate keys on a standard 101 or 102-key keyboard.

For example, if you are using VT220 to run Meridian Mail, the Meridian Mail softkeys (which appear at the bottom of the menus and screens) will correspond to the appropriate function keys on your keyboard. The Meridian Mail softkeys correspond to the function keys F6 through F10 on a standard 101 or 102-key keyboard. Therefore, in a Meridian 1 session, you would press F6 to select Softkey 1, F7 to select Softkey 2, etc. For more information on the Meridian Mail softkeys, refer to the *Meridian Mail System Administration Guide*

Tables 9 through 11 list the keyboard mappings for VT220 on standard 101 and 102-key keyboards.

Table 9
Keyboard mappings - VT key

VT Key	PC Key
PF1	Num Lock
PF2	Numpad Slash
PF3	Numpad Star
PF4	Numpad Minus
Find	Insert
Insert	Home
Select	Delete
Up Arrow	Up Arrow
Down Arrow	Down Arrow
Left Arrow	Left Arrow
Right Arrow	Right Arrow
F6	F6
F7	F7
F8	F8
F9	F9
F10	F10
F11	F11
F12	F12
F13	Sys Rq
F14	Scroll Lock
Help	F2
Do	F3

Table 9 (Continued)
Keyboard mappings - VT key

VT Key	PC Key
F17	Ctrl-F7
F18	Ctrl-F8
F19	Ctrl-F9
F20	Ctrl-F10

Table 10
Keyboard mappings - VT action

VT Key	PC Key
Remove	Page Up
Next Screen	Page Down
Prev Screen	End
Hold Screen	F1
Compose	Unmapped
Delete	Backspace
Keypad Command	Numpad Plus
Keypad Enter	Numpad Enter
Break	F5
Long Break	Shift-F5
Control Break	Ctrl-F5
Print Screen	Unmapped
Keypad 0	Numpad 0
Keypad 1	Numpad 1

Table 10 (Continued)
Keyboard mappings - VT action

VT Key	PC Key
Keypad 2	Numpad 2
Keypad 3	Numpad 3
Keypad 4	Numpad 4
Keypad 5	Numpad 5
Keypad 6	Numpad 6
Keypad 7	Numpad 7
Keypad 8	Numpad 8
Keypad 9	Numpad 9
Keypad Minus	Ctrl-Numpad Minus
Keypad Period	Numpad Del

Table 11
Keyboard mappings - VT action scroll

VT Key	PC Key
Scroll Left	Ctrl-Left Arrow
Scroll Right	Ctrl-Right Arrow
Scroll Up	Ctrl-Up Arrow
Scroll Down	Ctrl-Down Arrow

System Monitor

The OTM System Monitor is a Microsoft Windows executable program that runs in the background on the OTM Server. System Monitor displays the PC's resources (such as, memory and CPU usage) and issues alarms when system resources are low. The System Monitor utility allows you to do the following:

- turn a system alarm on or off and define the conditions (where, when, and what type of alarm) for sending alarm messages
- enable the System Monitor to automatically start when Navigator starts
- view the virtual, physical, and total memory available
- view the total CPU usage information
- view the processes now running on the system
- view the applications now running on the system
- view the performance of the NT server
- ping another machine to test network connections

Access System Monitor

Access the OTM System Monitor with the Microsoft Windows Run command. The path depends on your installation. However, you can locate the System Monitor executable in the **common services\program files** folder**.**

Double-click the System Monitor executable file. The System Monitor icon appears on the Windows task bar, and the System Monitor starts (the window is minimized on your screen). From this window you can perform all of the System Monitor functions

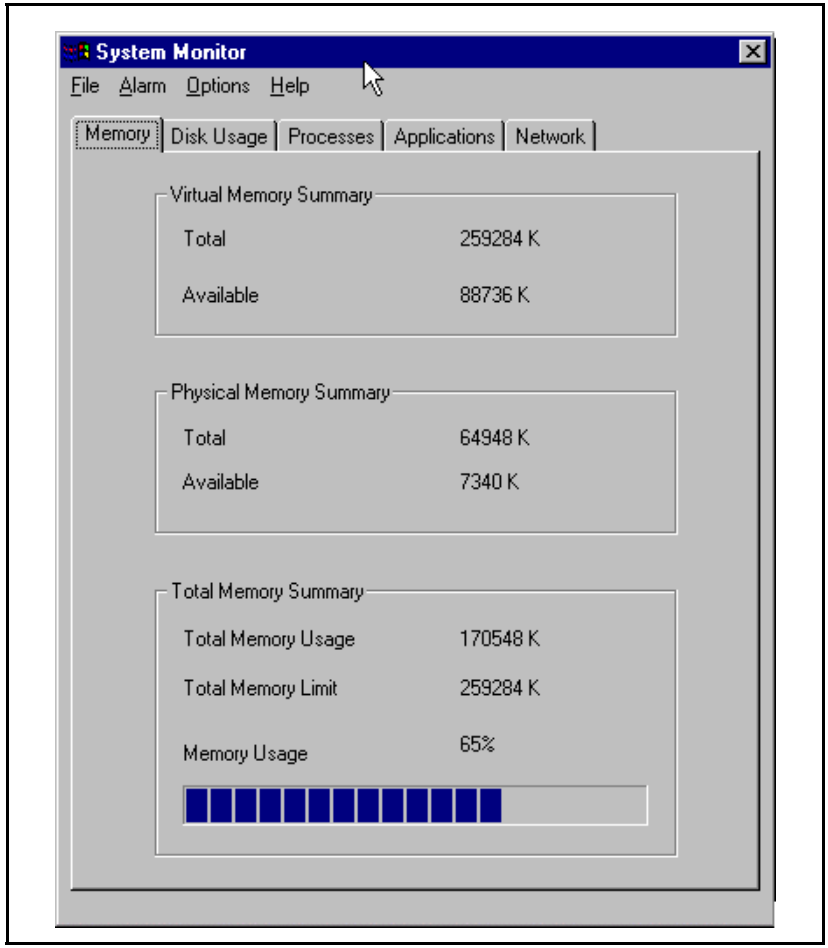
To enable or disable the System Monitor, select Options from the Options menu in the System Monitor window

View the virtual, physical, and total memory available

To view memory information, select the Memory tab on the System Monitor window.

The tab displays the amount of virtual and physical memory available, the total memory limit and the total memory now in use. The progress bar at the bottom of the tab graphically displays the Memory Usage percentage.

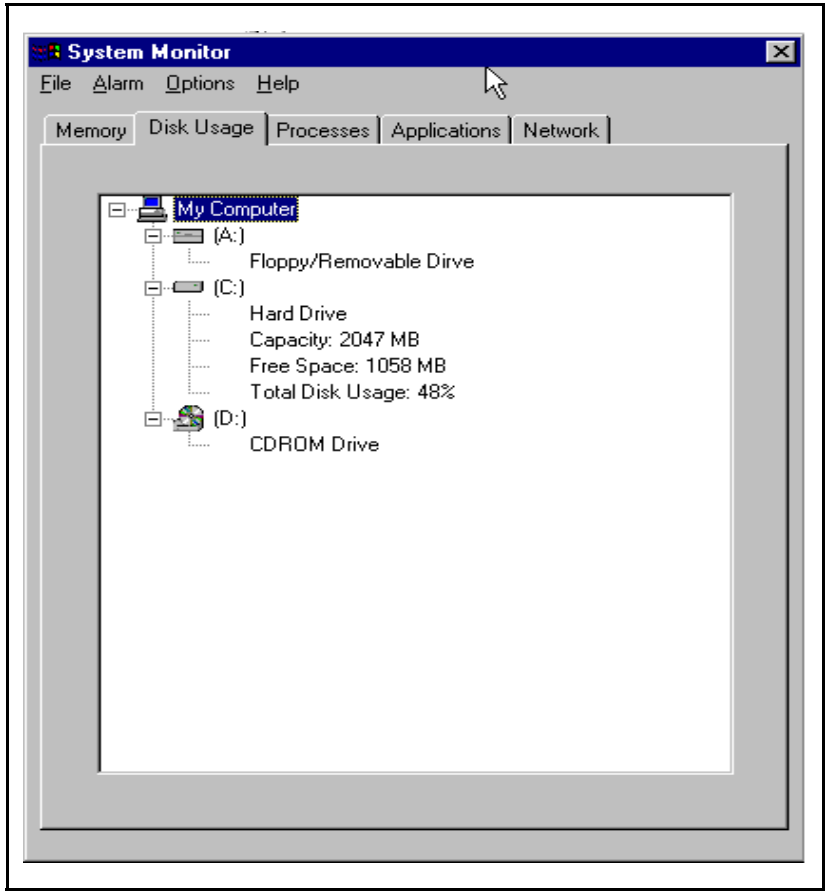
Figure 69
System Monitor - Memory Tab



View Disk Usage information

To view usage information for the disk, select the Disk Usage tab on the System Monitor window.

Figure 70
System Monitor - Disk Usage Tab



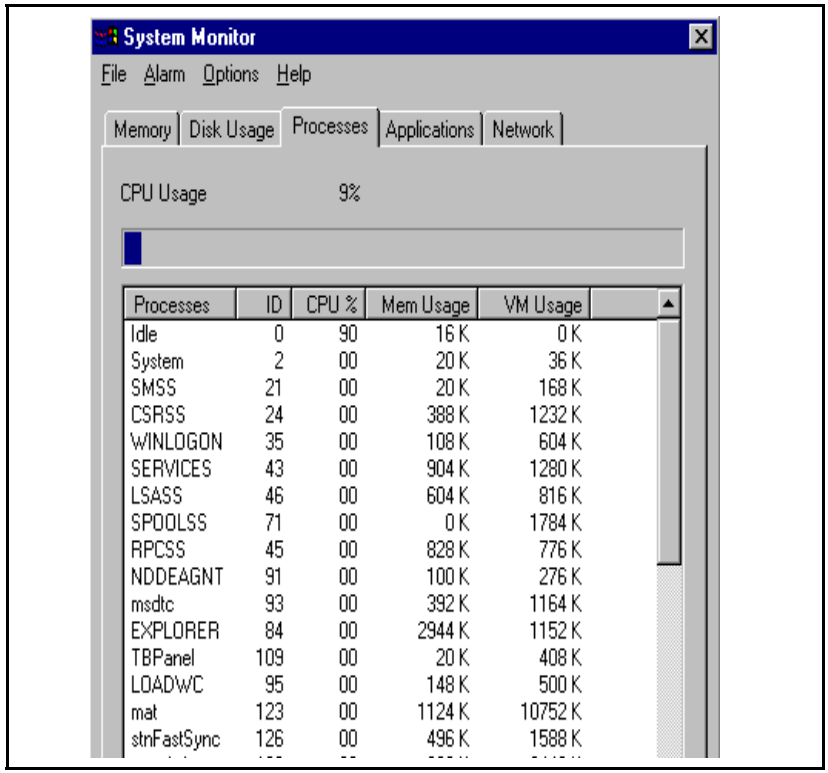
View CPU information

To view usage information for the CPU, select the Processes tab on the System Monitor window.

The tab displays five columns of information for each process that is running. The CPU usage is graphically displayed at the top of the tab. The tab displays the following information:

- **Processes:** the name of the process
- **ID:** the process ID
- **CPU%:** the percentage of the CPU used for the process
- **MEM USAGE:** the amount of memory used for the process
- **VM SIZE:** the amount of virtual memory used for the process

Figure 71
System Monitor -Processes Tab

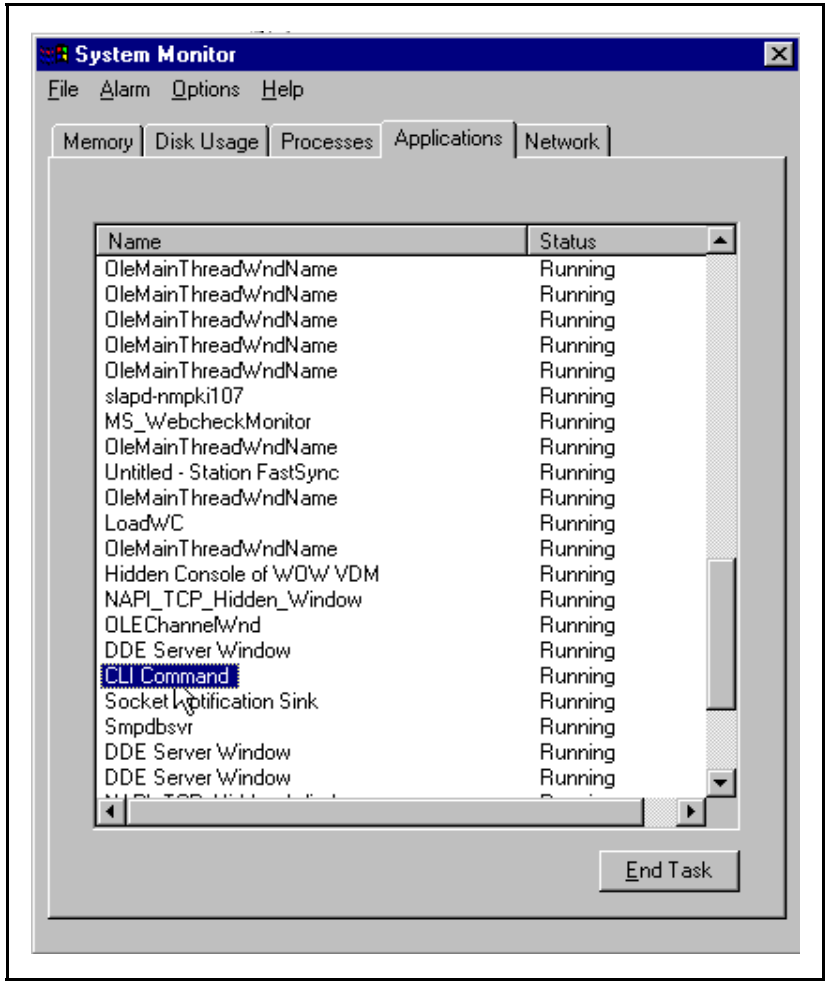

System Monitor
File Alarm Options Help
Memory Disk Usage Processes Applications Network
CPU Usage 9%
Processes ID CPU % Mem Usage VM Usage
Idle 0 90 16 K 0 K
System 2 00 20 K 36 K
SMSS 21 00 20 K 168 K
CSRSS 24 00 388 K 1232 K
WINLOGON 35 00 108 K 604 K
SERVICES 43 00 904 K 1280 K
LSASS 46 00 604 K 816 K
SPOOLSS 71 00 0 K 1784 K
RPCSS 45 00 828 K 776 K
NDDEAGNT 91 00 100 K 276 K
msdtc 93 00 392 K 1164 K
EXPLORER 84 00 2944 K 1152 K
TBPanel 109 00 20 K 408 K
LOADWC 95 00 148 K 500 K
mat 123 00 1124 K 10752 K
stnFastSync 126 00 496 K 1588 K

View and disable applications running on the system

To view and disable applications running on the system, select the Applications tab on the System Monitor window.

To stop an application from running, select the application and click the **End Task** button.

Figure 72
System Monitor - Applications Tab



View the performance of the server.

To view the NT server performance, select the Network tab on the System Monitor window. The tab displays the number of bytes received and sent per second by the NT server.

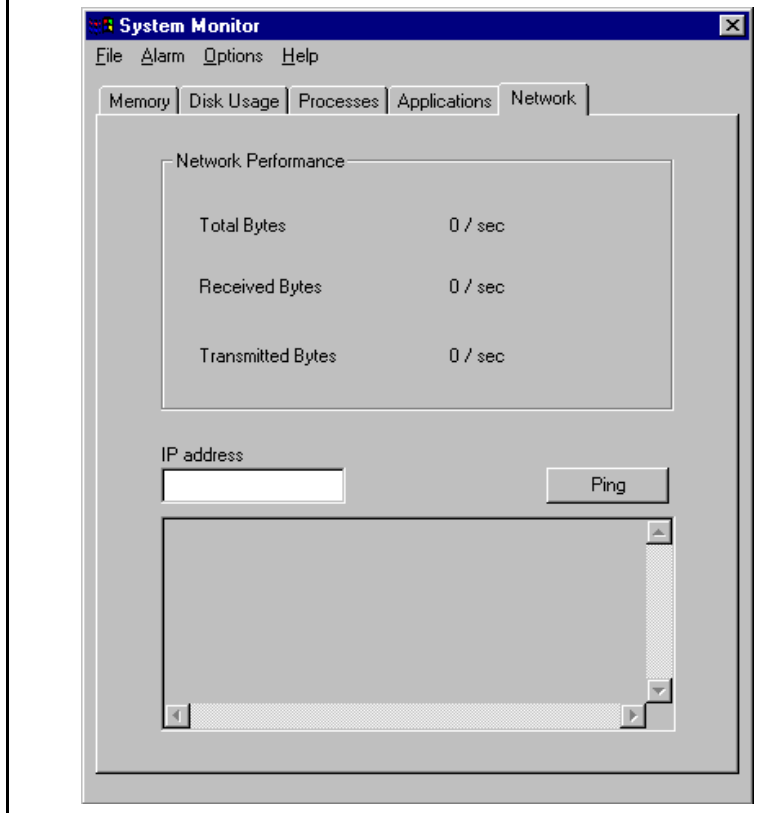
To view the performance of other machines:

1 Select the Network tab on the System Monitor window.

2 Enter the IP address of the machine you want to view.

3 Click the Ping button. The performance for the machine appears.

Figure 73
System Monitor - Network Tab

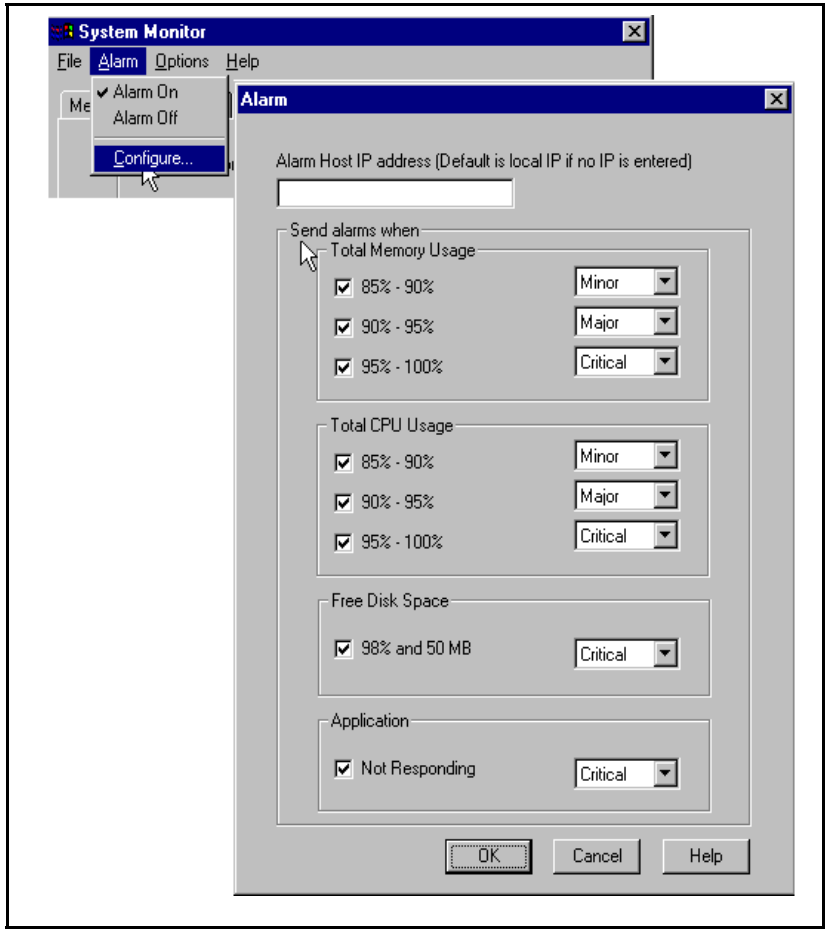


Set up alarms

You can set up where to send alarm messages when system resources are low and set the conditions for sending alarm messages.

To configure alarms, select Alarm from the Alarm menu in the System Monitor window. The Alarm window opens.

Figure 74
System Monitor - Alarm window



OTM Web Services

OTM provides both Web (http) and Microsoft Windows versions of many of its applications. This chapter discusses the Web versions of those applications:

- OTM Web Navigator
- Customizable Web Help
- User Access and Session Monitor pages
- Web Virtual Terminal Service
- Web System Terminal
- Desktop Services (an end-user application which provides web pages that display the configuration of the user's telephone as well as provide telephone troubleshooting and feature information)

OTM Web Navigator

The OTM Web Navigator provides the following:

- A list of systems and devices; users click on a system or device to:

  open a Web System Terminal or URL to manage system or device

  open Maintenance Pages for performing maintenance operations on M1 hardware

- Web-based alarm browser to view alarms and events from multiple systems and devices
- The ability to locate Meridian telephones and view configuration data
- Web-based Maintenance Pages to perform maintenance operations (enable, disable, etc.) on Meridian 1 hardware. Provides a subset of the Maintenance Windows functionality.
- OTM Web configuration pages (login access, LDAP sync reports, etc.).

The OTM administrator has the responsibility of installing, configuring, and maintaining OTM Web Services.

User Login and Security

The user logs into the OTM Web Navigator using their Microsoft Windows NT userID and password. Login security for OTM Web Services ensures protection against unauthorized entry and enforces access privileges for logged on users.

There are three categories of users:

- OTM administrator
- OTM technicians
- OTM Desktop Services end users

OTM administrators and technicians have user accounts in a Windows NT domain. Desktop Services end users may have accounts either in a Windows NT domain or through an LDAP server.

OTM Web application access privileges are controlled by the Administrator on a per-Windows NT user group basis. For example, the administrator may limit the OTM users access to only some of the OTM Web-based functionality. The OTM Web Navigator controls access to applications by shielding Web links that the user does not have access to. The directories and files comprising those applications are similarly protected.

The administrator configures Windows NT user groups and users using the Windows NT user interface. The administrator then determines the access privileges for each user group by using the OTM Web Navigator page. For more information about setting user access, refer to “OTM Web Navigator Access” on page 232.

When the user first points a browser to the OTM Navigator Web site, a check is performed to see if the user has the required OTM Java plug-in. If the plug-in is not installed, the user is given the option of downloading and installing the plug-in. This operation is similar to the standard download operations in that the user must download the plug-in to their hard disk then install it onto their machine.

While the plug-in check is being performed, the OTM splash screen is displayed. If the plug-in is installed, then the user is taken to the OTM Navigator login page.

Figure 75 shows the OTM login page. If the login is successful, the OTM Web Navigator page appears. If login is denied, an error message appears.

Figure 75
OTM Navigator Administrator login page

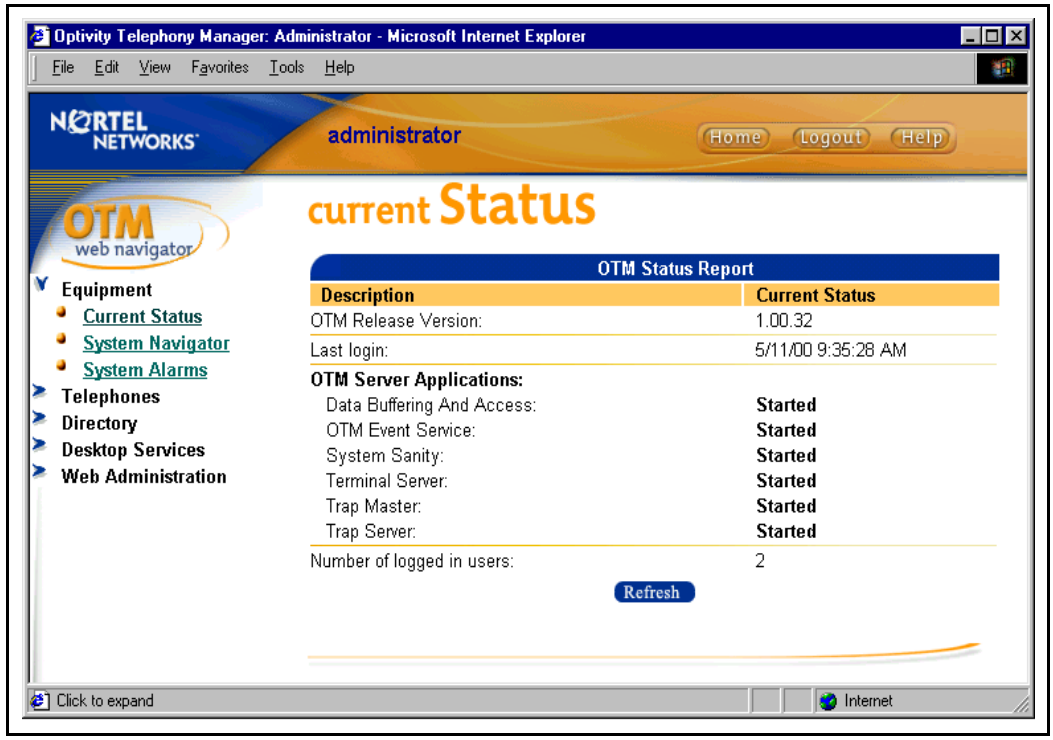
OTM Status page

As shown in Figure 76, when the administrator logs in, the OTM status page appears. You can access this page at anytime by clicking on the “OTM graphic” on the top of the tree or the Home button. The OTM Status Report contains:

- Last Login date
- Alarm Notification and DBA status
- LDAP sync failures

- Number of logged in users

Figure 76
OTM Administrator Status page



OTM System Navigator Page

The System Navigator page contains a list of systems defined in the OTM Windows Navigator. You can click on the system and select an application on the right. The list of applications depends on the system.

For Meridian 1:

- Web-based Virtual System Terminal connection to the overlays with help

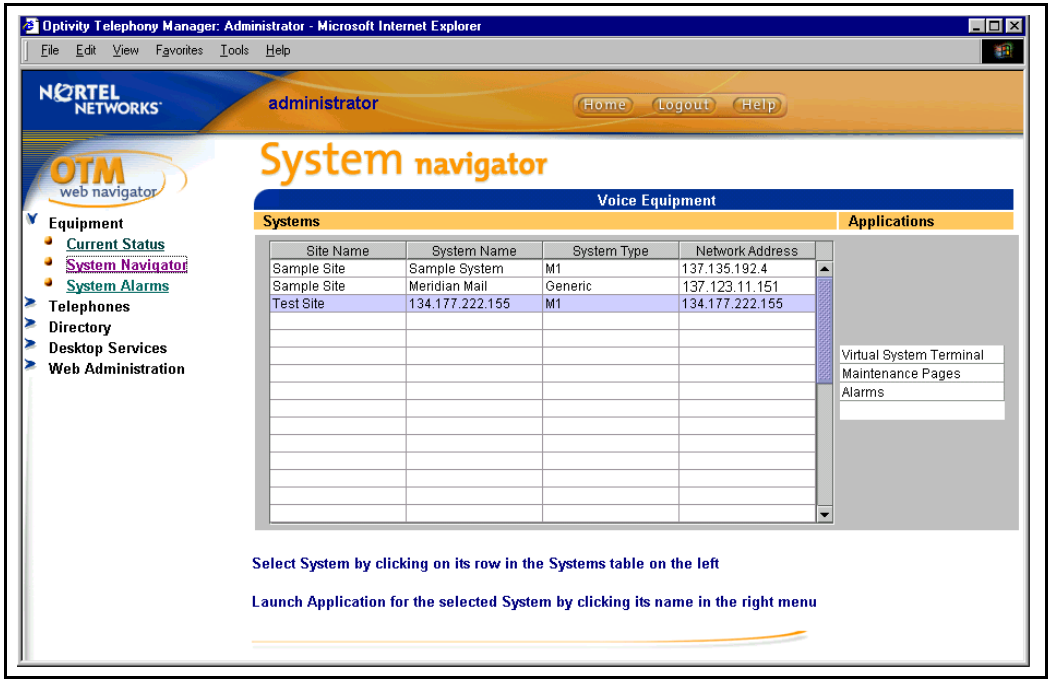
- Web-based Maintenance Pages
- Alarms for the selected Meridian 1 (this opens the Systems Alarms page with only the selected M1 alarms displayed)

For Generic Systems:

- Web-based Telnet connection
- Management URL for the system
- Alarms for the selected system (this opens the Systems Alarms page with only the selected system alarms displayed)

The list of applications is determined by the OTM System Properties in the OTM Windows Navigator and the Virtual Terminal Setup. See “OTM Web Virtual Terminal Service” on page 235.

Figure 77
OTM Administrator System Navigator page



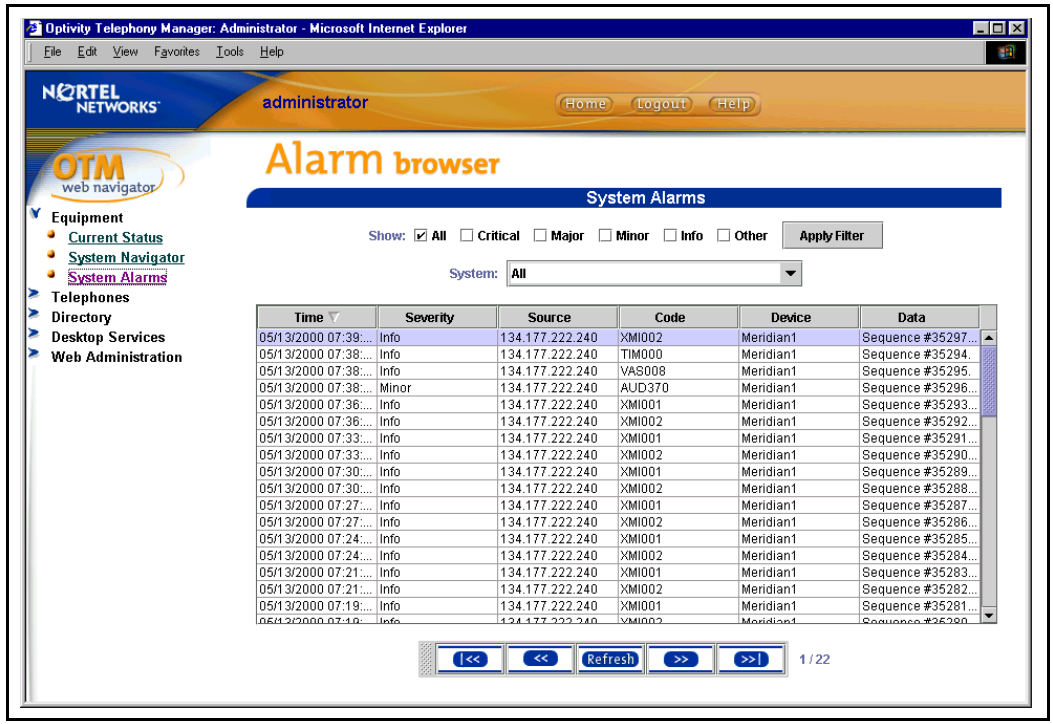
OTM Alarm browser page

The Alarm browser page contains a list of alarms received by the Alarm Manager Service running on the OTM Server. The list contain alarms and events from multiple systems and devices. You can perform the following actions:

- sort the alarms by clicking on a column header
- resize the columns
- filter the list via the Show checkboxes
- page through the list via the First/Last/Next/Previous buttons
- double click on an alarm for help

For more information on Alarm Management, see the "*OTM Alarm Management User Guide*".

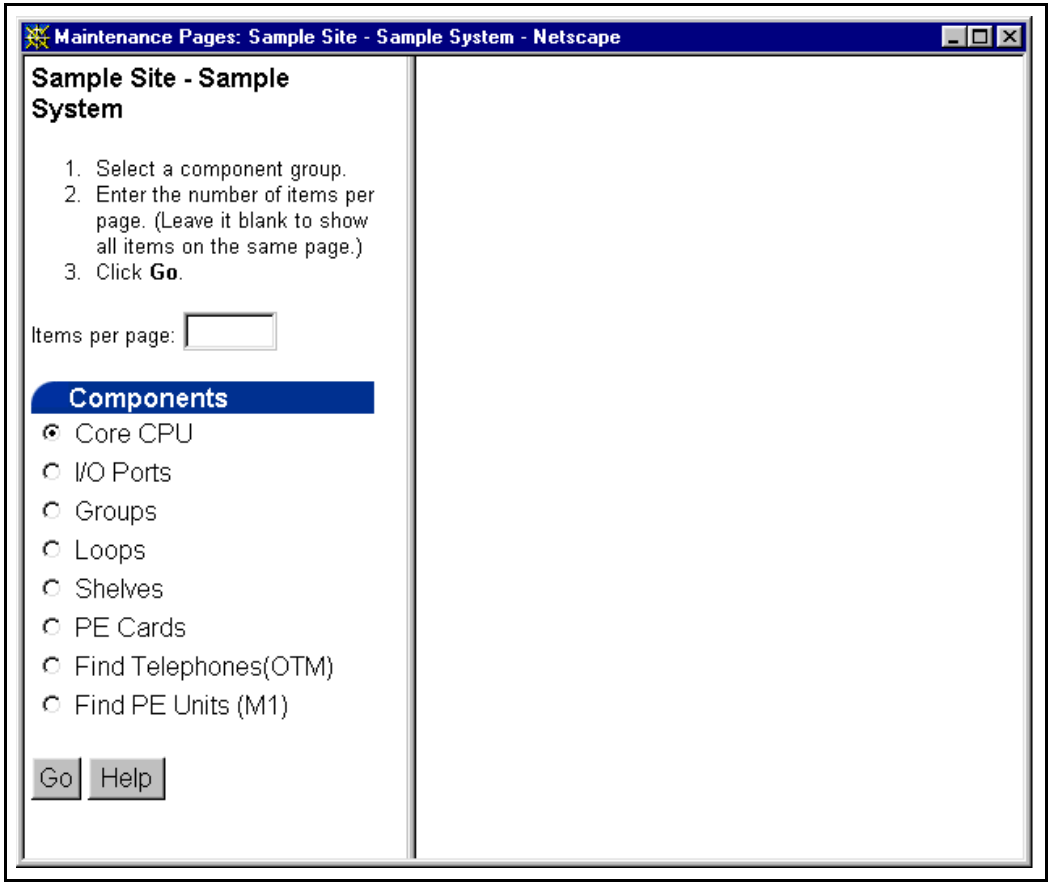
Figure 78
OTM Administrator Alarm browser page


Optivity Telephony Manager: Administrator - Microsoft Internet Explorer
File Edit View Favorites Tools Help
NORTEL NETWORKS
administrator
Home Logout Help
OTM web navigator
Alarm browser
Equipment
Current Status
System Navigator
System Alarms
Telephones
Directory
Desktop Services
Web Administration
System Alarms
Show: All Critical Major Minor Info Other
Apply Filter
System: All
Time Severity Source Code Device Data
05/13/2000 07:39:... Info 134.177.222.240 XMI002 Meridian1 Sequence #35297...
05/13/2000 07:38:... Info 134.177.222.240 TIM000 Meridian1 Sequence #35294.
05/13/2000 07:38:... Info 134.177.222.240 VAS008 Meridian1 Sequence #35295.
05/13/2000 07:38:... Minor 134.177.222.240 AUD370 Meridian1 Sequence #35296...
05/13/2000 07:36:... Info 134.177.222.240 XMI001 Meridian1 Sequence #35293...
05/13/2000 07:36:... Info 134.177.222.240 XMI002 Meridian1 Sequence #35292...
05/13/2000 07:33:... Info 134.177.222.240 XMI001 Meridian1 Sequence #35291...
05/13/2000 07:33:... Info 134.177.222.240 XMI002 Meridian1 Sequence #35290...
05/13/2000 07:30:... Info 134.177.222.240 XMI001 Meridian1 Sequence #35289...
05/13/2000 07:30:... Info 134.177.222.240 XMI002 Meridian1 Sequence #35288...
05/13/2000 07:27:... Info 134.177.222.240 XMI001 Meridian1 Sequence #35287...
05/13/2000 07:27:... Info 134.177.222.240 XMI002 Meridian1 Sequence #35286...
05/13/2000 07:24:... Info 134.177.222.240 XMI001 Meridian1 Sequence #35285...
05/13/2000 07:24:... Info 134.177.222.240 XMI002 Meridian1 Sequence #35284...
05/13/2000 07:21:... Info 134.177.222.240 XMI001 Meridian1 Sequence #35283...
05/13/2000 07:21:... Info 134.177.222.240 XMI002 Meridian1 Sequence #35282...
05/13/2000 07:19:... Info 134.177.222.240 XMI001 Meridian1 Sequence #35281...
|<< << Refresh >> >>| 1 / 22

OTM Maintenance Pages

Maintenance Pages are based on existing Maintenance Windows. You can use them to perform maintenance operations on Meridian 1 hardware. A subset of Maintenance Windows capability is provided in OTM Maintenance Pages.

Figure 79
Maintenance Pages



Find Telephones page

The Find Telephones page allows you to search for telephones in the OTM station database. Select a system, and enter the desired search criteria. The search returns a list of telephones.

- The drop down list of systems contains all Meridian 1 systems supported by this web site. The list items contains both the site and systems names as defined in the OTM Windows Navigator.
- The station database search only retrieves Prime DNs.
- The default search is by Last Name.

Figure 80
OTM Administrator Find Telephones search page

Find Results page

The Find Results page displays the list of telephones matching the search parameters.

- By clicking on the **Location** link, you open up a new browser window; which displays the Telephone pages for the telephone set. These are the same pages that appear when a desktop user displays his telephone using Desktop Services (see “Desktop Services” on page 247). Using the Web browser, however, you can access the Maintenance Help page for the telephone set by clicking on **Troubleshoot Problems**.
- Above the results the following is displayed:
  - — number of items found and the number of the currently displayed items
  - — sort drop down list
- You can sort on any field via the “Sorted by” drop down list. When you select a new sort, the results is display starting at the first page.
- Clicking on Find Again takes you back to the find page.
- If there are no telephones matching the search parameters, a “Found None” message appears with a Find Again button (that takes you back to the Find page).

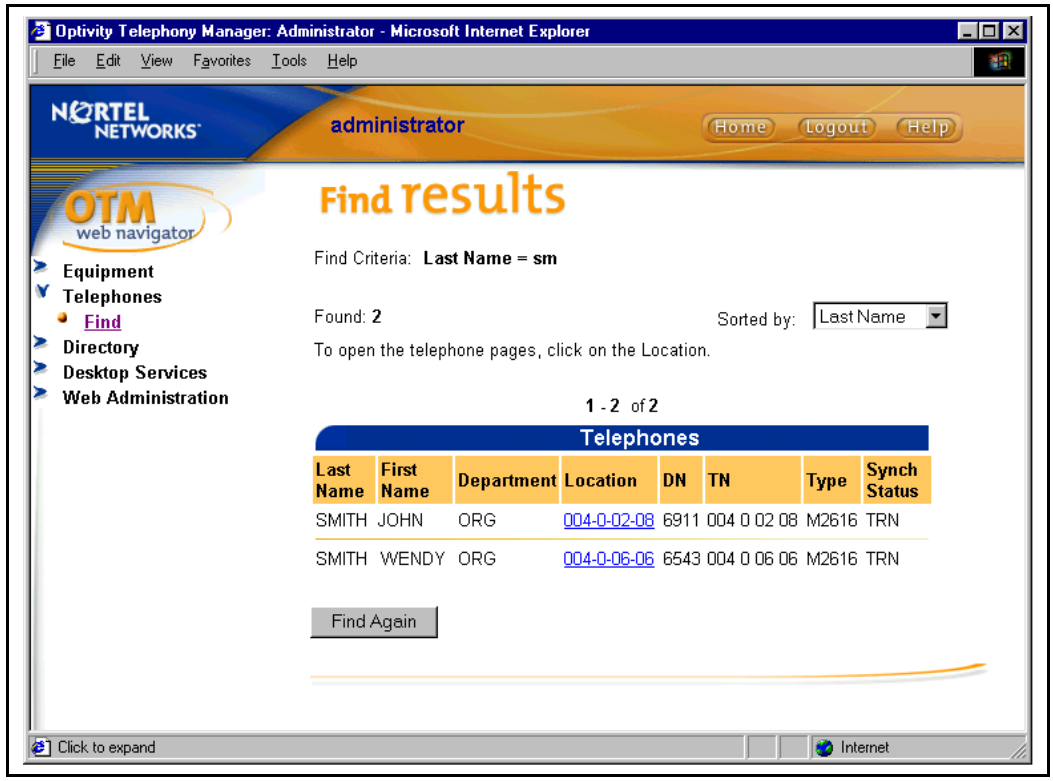
Directory Global Change page

This page is used to perform global change on the following OTM Directory fields:

- Desktop User Group
- Login Name

These fields are required for access to the Desktop Services web pages. The Desktop User Group field can be administrator, end user, or blank. If the User Group is blank, then the user does not have access to the Desktop Services. Administrator or end user determine the telephone features the user can see as defined in the Desktop User Groups page (see page 223).

Figure 81
OTM Administrator Find Telephones results page

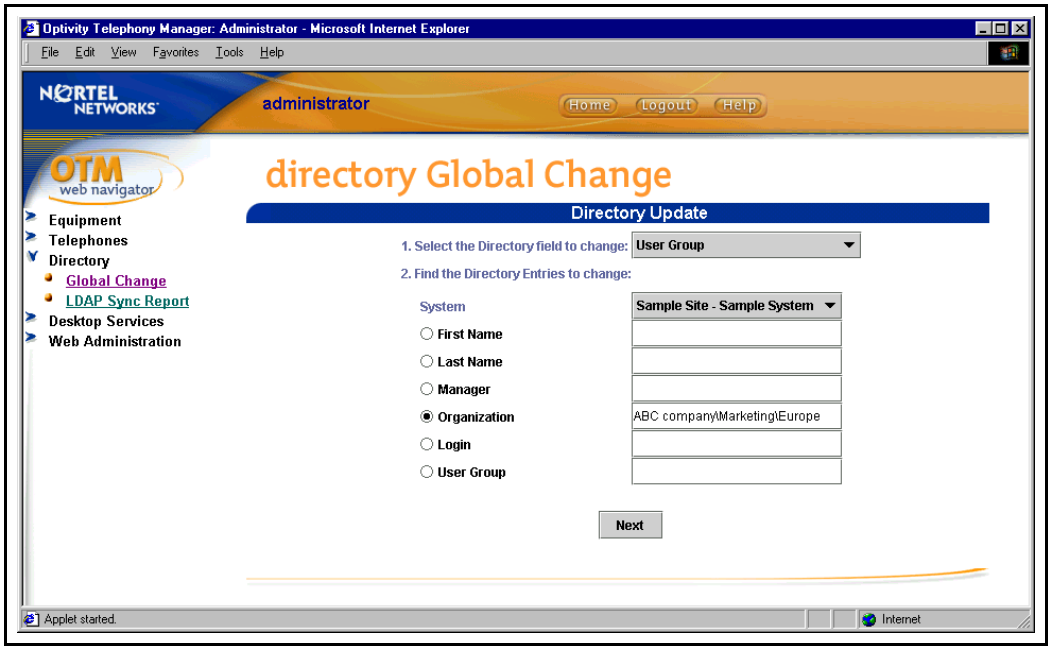

Optivity Telephony Manager: Administrator - Microsoft Internet Explorer
File Edit View Favorites Tools Help
NORTEL NETWORKS
administrator
Home Logout Help
OTM web navigator
Equipment
Telephones
Find
Directory
Desktop Services
Web Administration
Find results
Find Criteria: Last Name = sm
Found: 2
Sorted by: Last Name
To open the telephone pages, click on the Location.
1 - 2 of 2
Telephones
Last Name | First Name | Department | Location | DN | TN | Type | Synch Status
SMITH JOHN ORG 004-0-02-08 6911 004 0 02 08 M2616 TRN
SMITH WENDY ORG 004-0-06-06 6543 004 0 06 06 M2616 TRN
Find Again
Click to expand
Internet

The login name is the user's Windows NT login name. When the user logs in to the Desktop Services web pages, OTM validates the log in with Windows NT. If login is successful, OTM looks up the user's Desktop User Group field in the OTM Directory to determine which telephone features to display.

Figure 82 illustrates the Directory Global Change page used to select the field to change and find the directory entries to change. Figure 83 illustrates the page used to set the new value and then select the entries to change.

Note: For the Organization field, enter the complete organization path from the Organization Hierarchy.

Figure 82
Directory Global Change - find entries



Directory LDAP sync Report page

The LDAP sync Report page initially shows a list of the existing LDAP Sync Reports (sync of employee data between the OTM Directory Service and the customer's LDAP Sever). Clicks on a report to view it. Figure 84 shows the report format.

Figure 83
Directory Global Change - set value

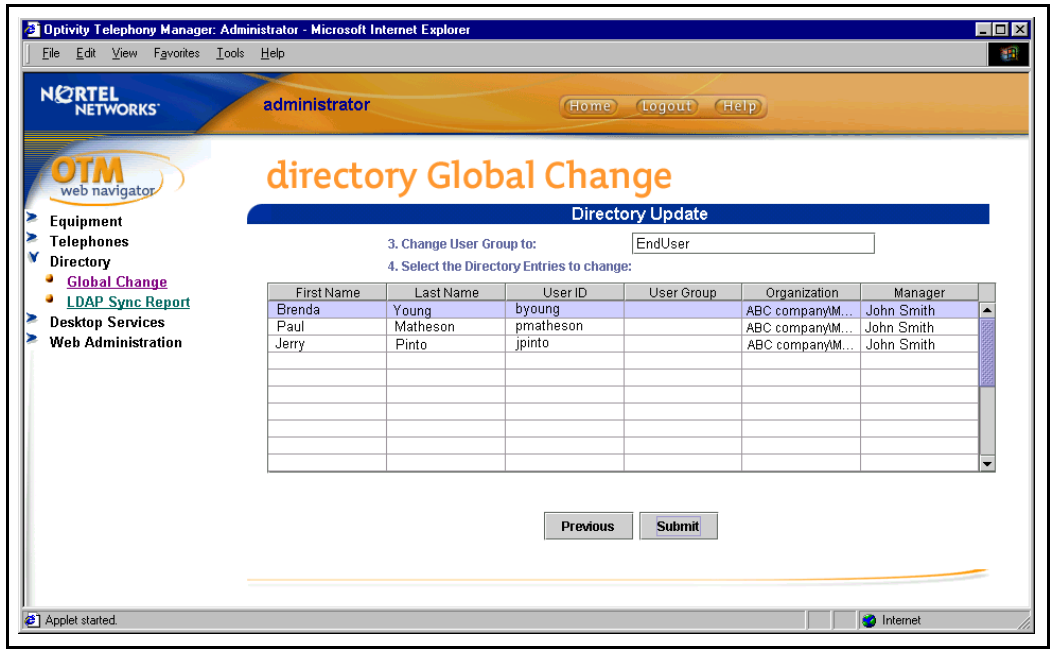
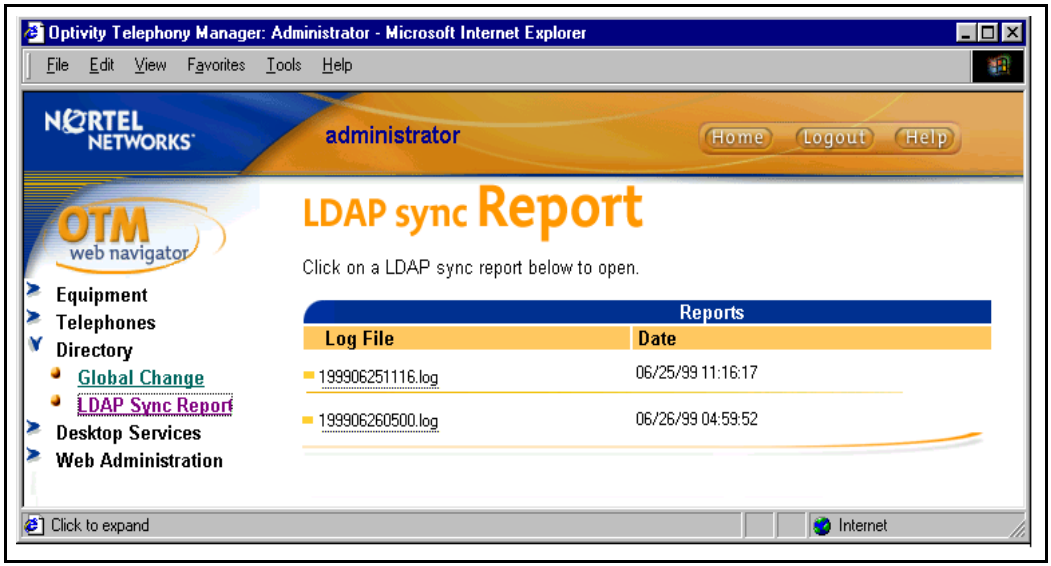


Figure 84
OTM Administrator LDAP sync report page

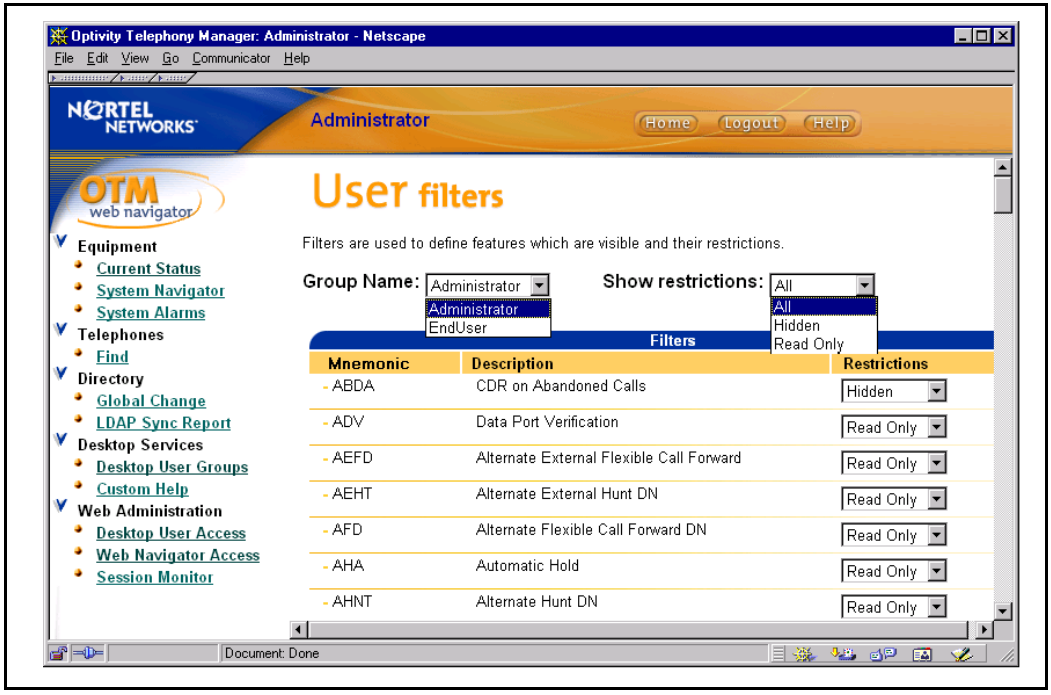


Desktop user groups page

The Desktop User Groups page determines which features are available on the telephone Feature page.

- The list contains all the non-key features listed alphabetically by prompt in LD10 & 11. Each feature is assigned a restriction of Hidden or Read Only. If Hidden, the feature does not appear in the end user Feature drop down list.
- There are two templates: Administrator and End User. The Administrator template is used when you view the telephone through the Web Navigator Find Telephone pages. The End User template is used when you log on to the end user web site.
- The Show restrictions drop down list contains: All, Hidden, and Read Only. This is used to limit the size of the list.
- Submit and Reset buttons appear at the bottom of the list.

Figure 85
OTM Administrator Desktop user groups page



Customizable Web Help

The Custom Help page allows you to customize help text for OTM Web-based applications. Typically, you will only customize help that is for end users.

All Web-based help files can be customized. You can either:

- replaced them with customized help provided by you (the administrator), or
- annotate the help files

The custom help page provides a list of all Web-based help files. You can use a custom help file instead of the standard help by copying and then editing and/or annotating the standard help.

OTM includes sample HTML files that you can use to create customized help for the end user. Sample help files are provided for the following help screen topics:

- dialing plans
- system speed call lists
- flexible feature codes

Nortel Networks uses a PC-based application, RoboHelp, to generate Web-based help files. RoboHelp is also used to generate OTM/MAT Windows-based help. RoboHelp generates individual help pages, a table of contents, and index files. Each individual help page has Content and Index buttons to return you to the Help table of contents or index. Next and Previous buttons allow you to navigate to the next help for topic. A Java applet shows the table of contents and index as navigation frames. Versions of the table of contents and index are also available without frames. Customizable Web Help will work with the help system provided with RoboHelp.

Customizing Standard Help Files

The following figures show how to access, customize or annotate the help files. Click on the Customized Help item and tree to access the help file you want to customize. One example is shown in the following figure. All pages appear in the Content frame of the Web Navigator.

Figure 86
Selecting the standard OTM Help files - Help Groups

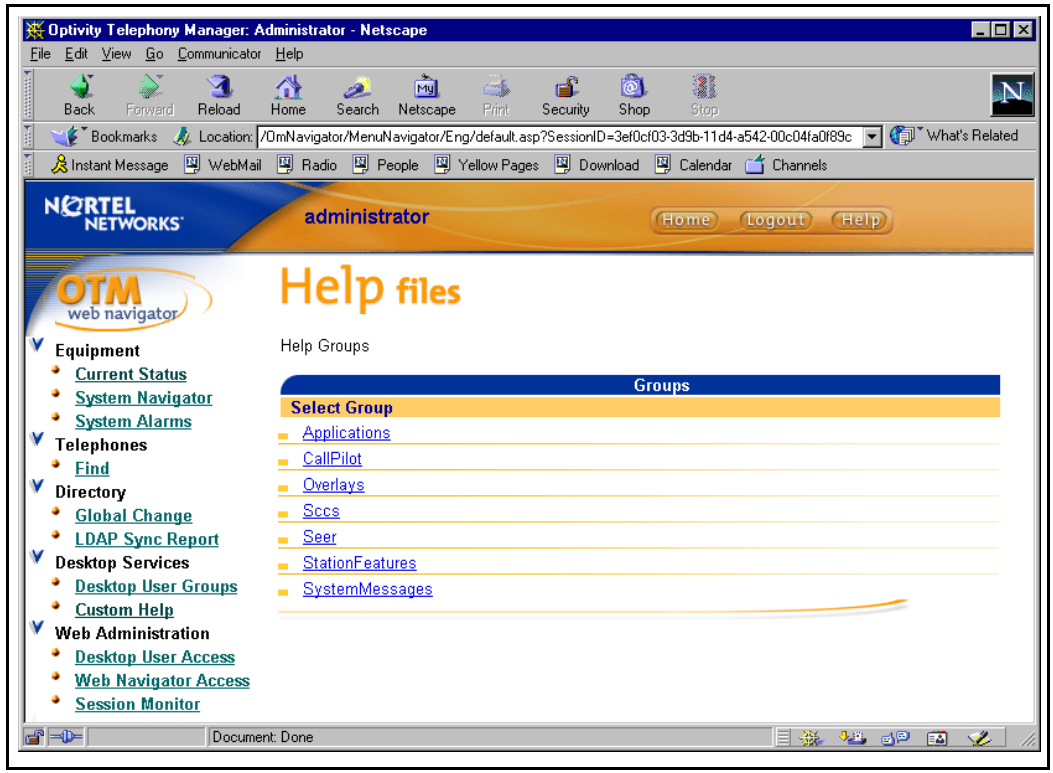


Figure 87
Selecting the standard OTM Help files - Help subgroups

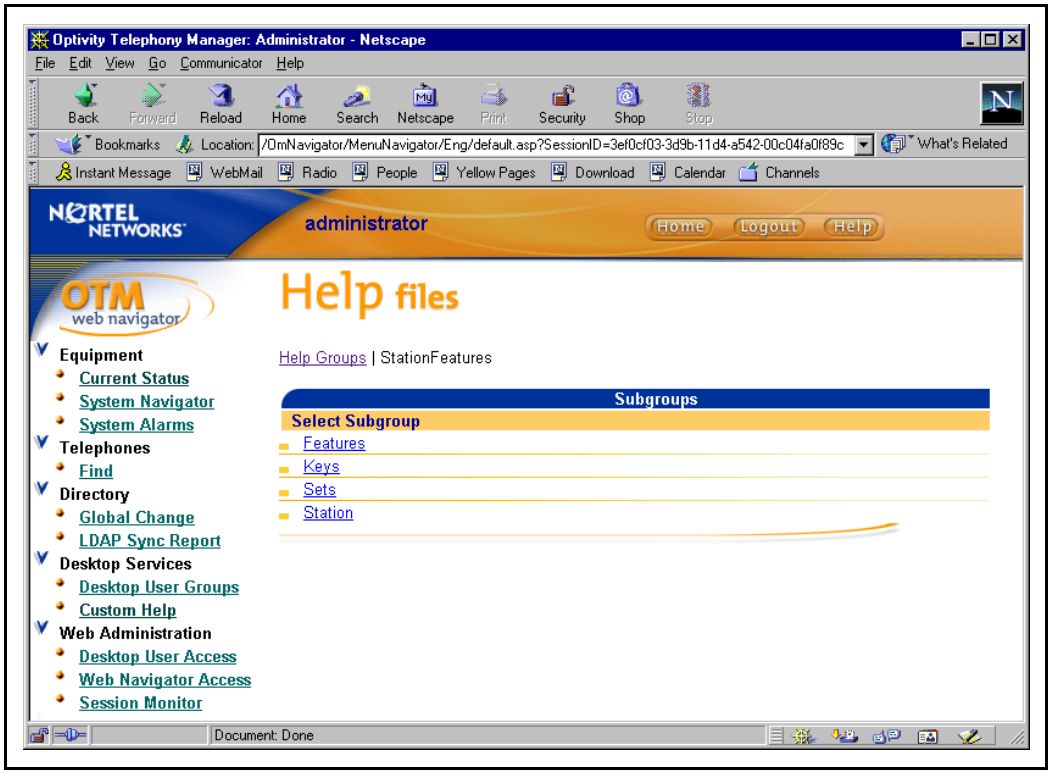
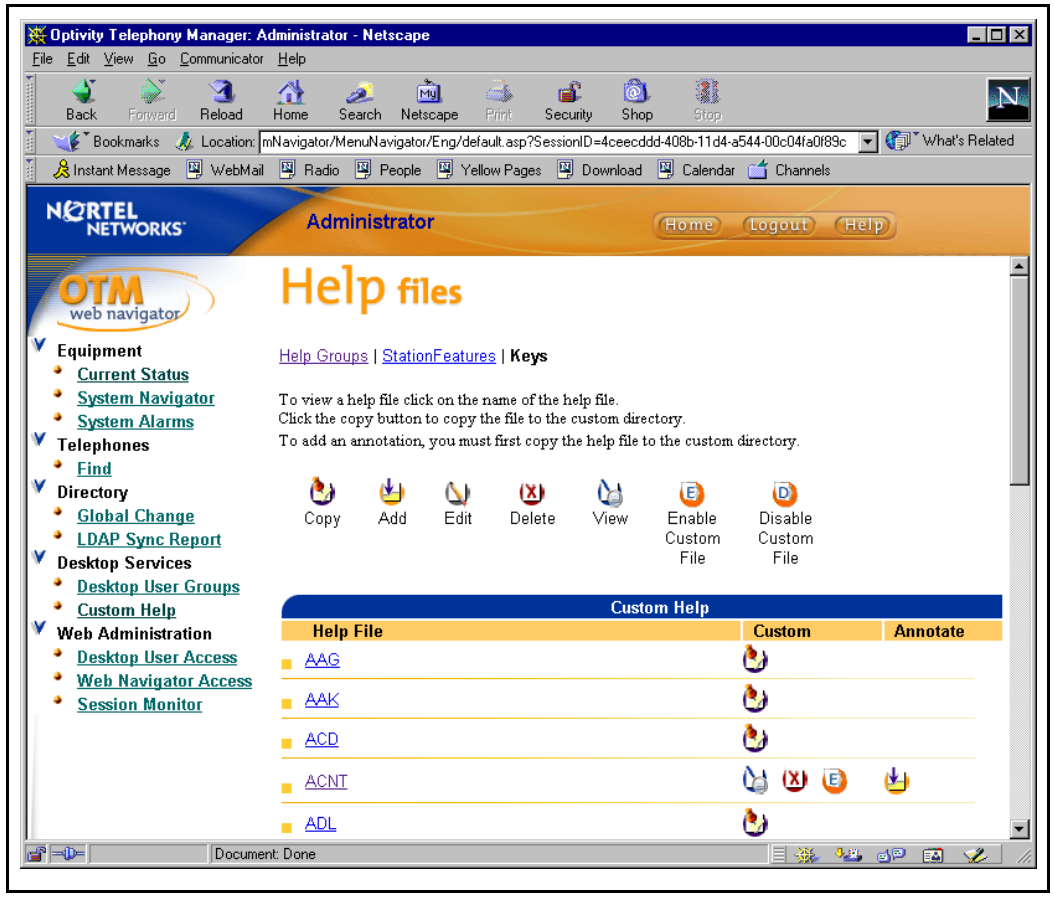


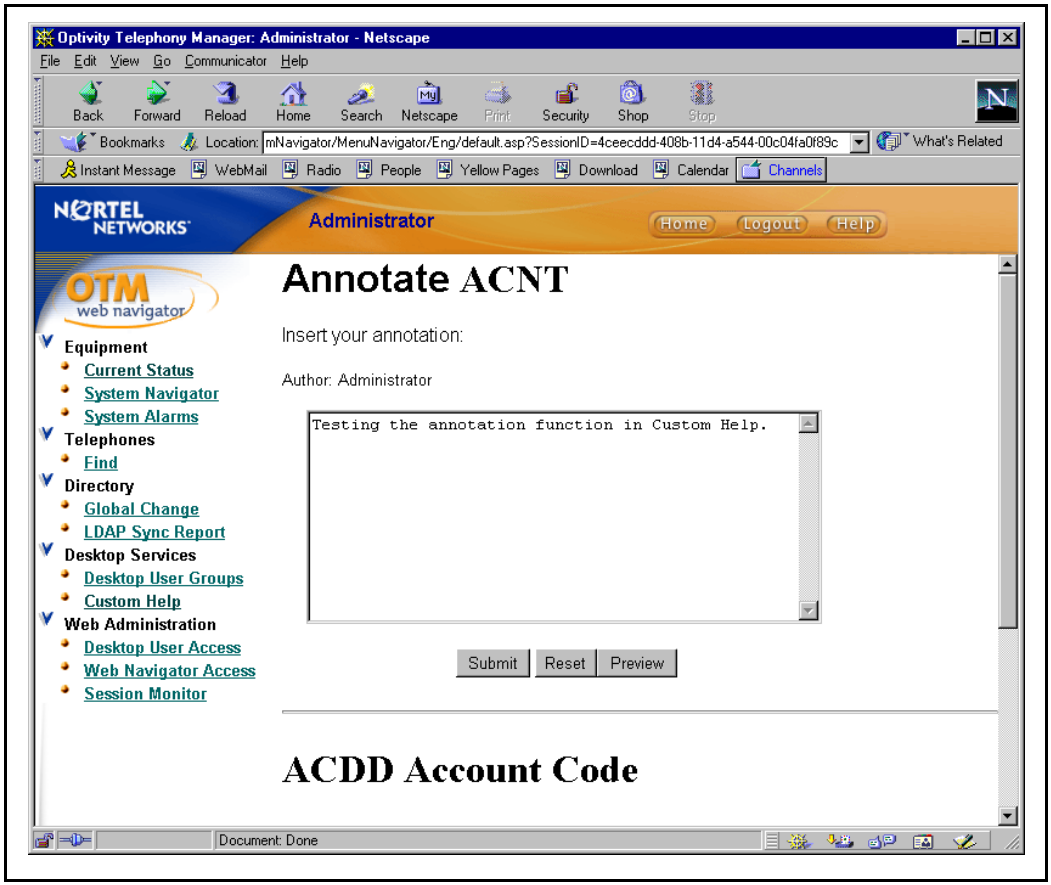
Figure 88 shows the help files for the selected help group and subgroup. To customize a help file, click the help topic on the left, then click the Copy button. This copies the file to a custom help folder. Then click the View, Annotate, or Delete buttons. When you do not enable the custom help file, the standard help file appears.

Figure 88
Customizing standard Help files



Click on the Help file name to display the shipped help. Click on the custom help file View button to display a two frame window with the location of the custom help file and the help file contents.

Figure 89
Annotating custom Help files



You can only annotate a customized help file. To annotate the file, click on the “Annotate” button. The Edit Annotation window opens (Figure 89). Figure 90 shows the annotation for a help topic. When you submit the annotation, the help file includes a paper clip graphic that opens the annotation.

Figure 90
Viewing an Annotated Help file

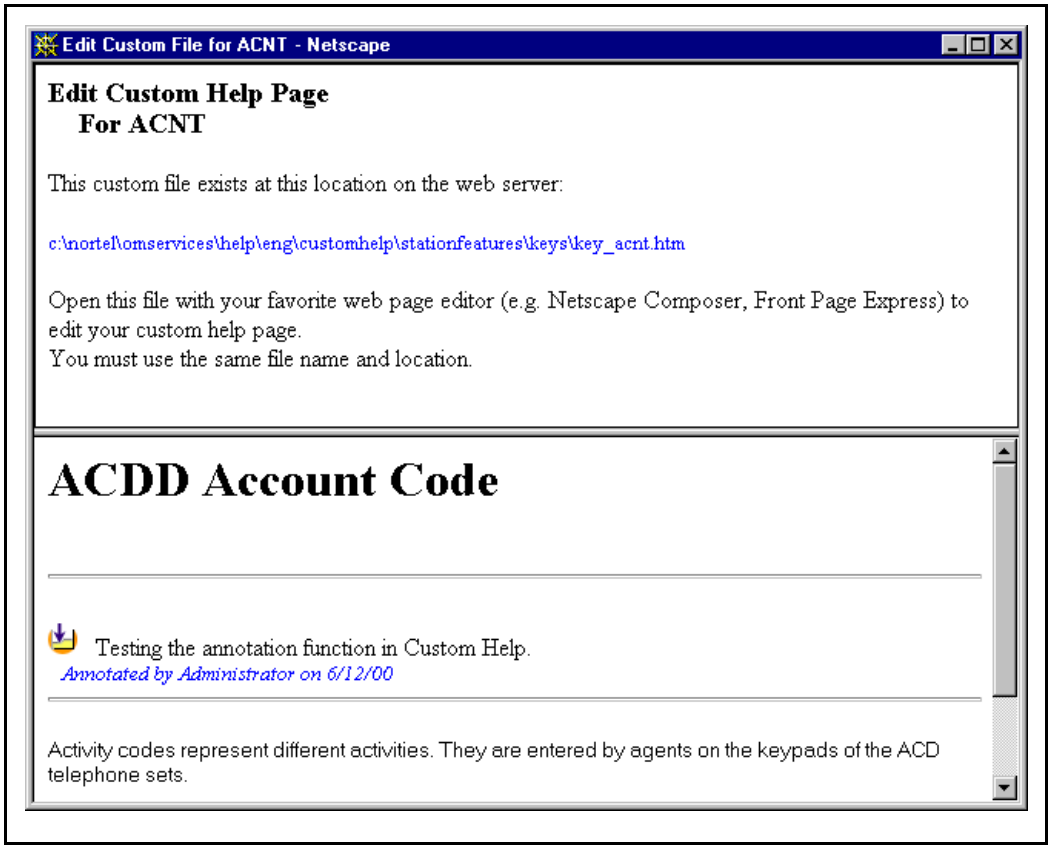
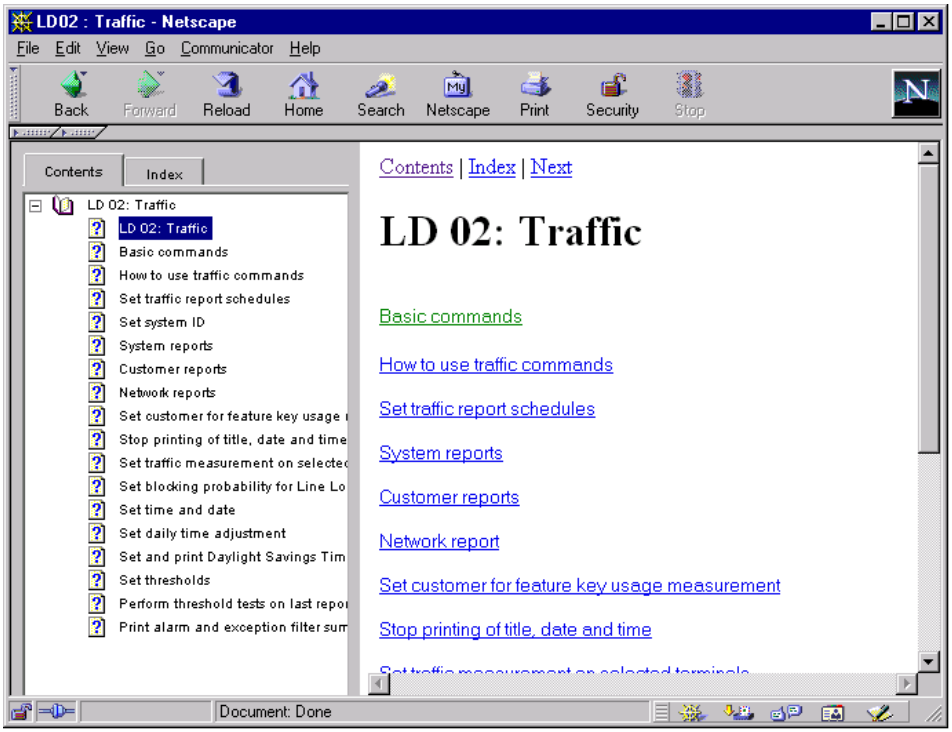

Edit Custom File for ACNT - Netscape
Edit Custom Help Page
For ACNT
This custom file exists at this location on the web server:
c:\nortel\omservices\help\eng\customhelp\stationfeatures\keys\key_acnt.htm
Open this file with your favorite web page editor (e.g. Netscape Composer, Front Page Express) to edit your custom help page.
You must use the same file name and location.
ACDD Account Code
Testing the annotation function in Custom Help.
Annotated by Administrator on 6/12/00
Activity codes represent different activities. They are entered by agents on the keypads of the ACD telephone sets.

Figure 91 shows the Web-based help file for overlay 02.

Figure 91
Sample Web-based Help screen


LD02 : Traffic - Netscape
File Edit View Go Communicator Help
Back Forward Reload Home Search Netscape Print Security Stop
Contents Index
LD 02: Traffic
LD 02: Traffic
Basic commands
How to use traffic commands
Set traffic report schedules
Set system ID
System reports
Customer reports
Network reports
Set customer for feature key usage
Stop printing of title, date and time
Set traffic measurement on selected
Set blocking probability for Line Lo
Set time and date
Set daily time adjustment
Set and print Daylight Savings Tim
Set thresholds
Perform threshold tests on last repor
Print alarm and exception filter sum
Contents | Index | Next
LD 02: Traffic
Basic commands
How to use traffic commands
Set traffic report schedules
System reports
Customer reports
Network report
Set customer for feature key usage measurement
Stop printing of title, date and time
Document: Done

User Access and Session Monitor

Desktop User Access

The Desktop User Access page allows you to select the method of user login authentication. The options are:

- LDAP Server

  Note: User login identification is required for LDAP. The drop down menu only contains employee ID (UID) and email.

- Windows NT Domain.

Note: The edit box for the Windows NT domain name is required for Windows NT authentication.

For information on configuring users for desktop access, see “Enable web desktop end user access” on page 149.

Figure 92
OTM Administrator Desktop User Access screen

OTM Web Navigator Access

The OTM Web Navigator Access page determines which OTM Web Navigator pages are available to users. You can create user groups using the Windows NT Server user interface. Select the user group from the drop down and then check the pages visible to users in that group. The list of pages is the same as the items in the OTM Web Navigator tree.

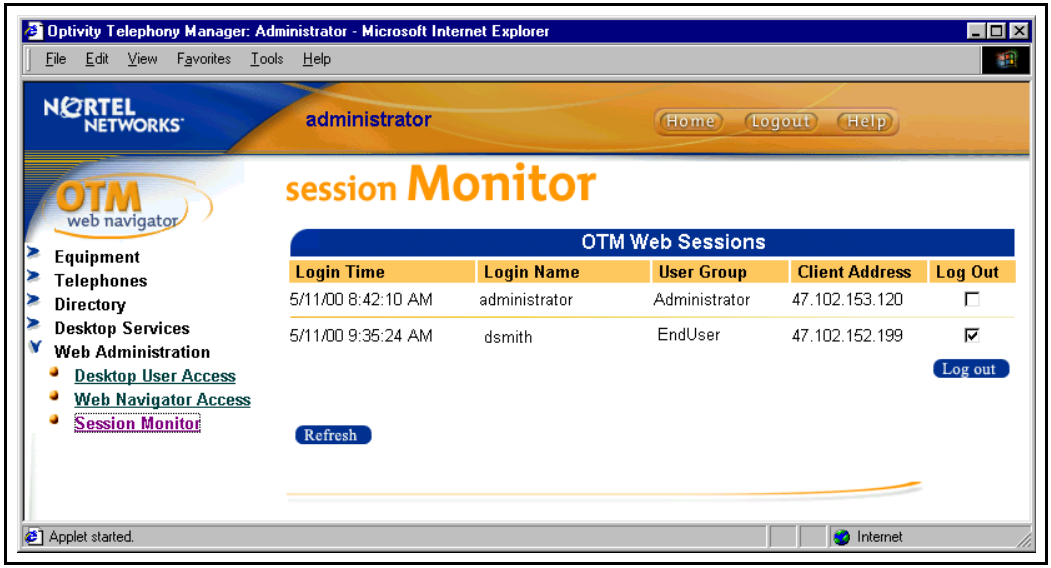
Note: The Save button only submits the changes on the selected User Group.

Figure 93
OTM Administrator Web Navigator Access screen

Session Monitor

Login security prevents the web pages from being accessed without first successfully providing a valid username and password combination. The Session Monitor page contains a list of logged in users with the login time and IP address.

Figure 94
OTM Administrator Session Monitor screen



OTM Web Virtual Terminal Service

The OTM Web Virtual Terminal Service provides a single point of connectivity for a Web-based terminal window. Launch the OTM Web Navigator from Internet Explorer or Netscape Navigator, and select the system to connect to from the GUI. This does not require knowledge of such items as IP addresses and serial port settings because the information is stored on the server. You determine who gets access to what, and you can change the settings without interrupting everyday operation.

The OTM server connects to devices over IP network and serial ports on the OTM server. In 1.0, virtual terminal supports connection primarily to an M1 via:

- Meridian 1 PTY port
- Direct serial connection
- Telnet

Support for modem dial-up and VT220 may be added in a future release.

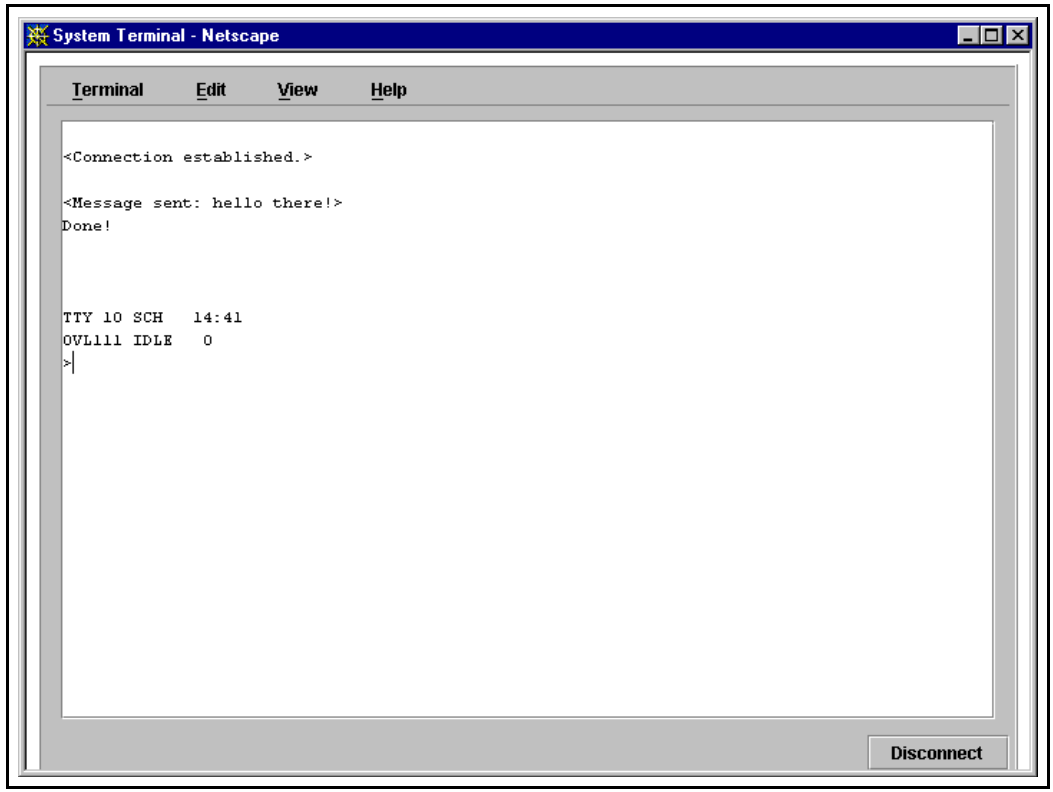
OTM Web System Terminal

The OTM Web System Terminal resembles the OTM Windows System Terminal application. When you connect to a Meridian 1 it provides similar context sensitive help for the overlays and error messages. When you connect to other devices it provides a basic Telnet connection. The OTM Web System Terminal is a Java applet embedded in an HTML page.Once connected to the Terminal Server, the OTM Web System Terminal communicates with the selected device through the Terminal Server. Only the first client that connects to a port can send character input to the host.

The OTM Web System Terminal displays most messages in a window. However, some messages that do not require immediate attention, appear between the < > characters in the terminal screen. See Figure 95. These messages are not sent to the host device or logged on the server. The messages can be:

- Status of this client (connected, disconnected, read-only connection, etc.)
- Status of other client (monitoring this port, disconnected)
- Broadcast message (received from another client, sent to another client)

Figure 95
Terminal Client showing messages



OTM Web System Terminal Menus

The OTM Web System Terminal window has the following menu items:

File menu

- Connect - Connect to a virtual port. This item appears when the client is not connected to a port.

  Note: For a non-administrator user, if a port is already in use by someone else, then the connection is not allowed.
  If you have administrator privilege, you may connect to a port already in use by someone else. However, you may only monitor the session, and cannot send text to the host.

- Disconnect - Disconnect from a virtual port. This item appears when the client is connected to a port.
- Disconnect Others - Disconnect all other clients from a virtual port. This item appears only for a user with administrator privilege.

  Note: If you select Terminal->Disconnect Others, then all other clients to the virtual port are disconnected, and you are then allowed to send text to the host.

- Send Message - Display a Send Message dialog. This allows you to "broadcast" a message to all other users on the same virtual port.

Figure 96
Send Message dialog box

- Parse M1 Output - This menu has a checkmark to enable parsing of overlay interaction to provide the context sensitive help. To reduce some unnecessary CPU overhead, you should uncheck this menu item for a non-M1 device. If it is checked, then the Help->Current Overlay and Help->Current Prompt menu items become visible to provide context-sensitive help for the M1 overlays.

Edit Menu

- Copy - Copy the selected text to the clipboard.
- Select All - Select all text in the output window.

View Menu

- Look & Feel - cascading menu determines the look of and feel of the user interface. You can choose:
  Java
  Windows
  Motif
- Overlay Passthru Mode - Make the applet behave like the MAT System Terminal application. It provides a separate edit box to enter commands, which allows for backspace while working in the M1 overlay environment.

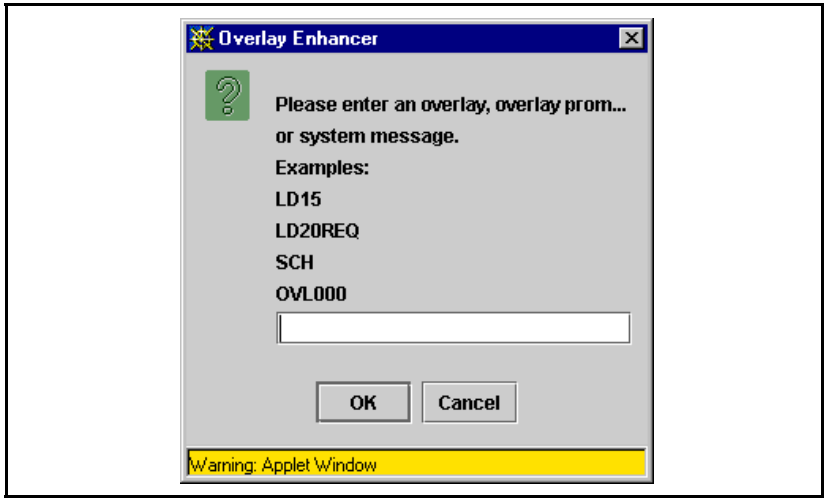
  Note: If this menu item is checked, then the Help->Search M1 Help Files menu item becomes visible. If this menu item is unchecked, then it behaves like a standard terminal window.

Help Menu

- Current Overlay - Display help for the current overlay in a separate browser window. The OTM Web System Terminal monitors character I/O to keep track of the overlay information.
- Current Prompt - Display help for the current overlay prompt in a separate browser window. The OTM Web System Terminal monitors character I/O to keep track of the overlay information.
- I/O Navigator - Display the Overlay Enhancer dialog. This allows you to search for help on an overlay, overlay prompt, or M1 message.

Note: Like the MAT and OTM System Terminal, the OTM Web System Terminal has context-sensitive help. It monitors M1 input and output to determine the current overlay and prompt. You can also search for help for an overlay ("LD22", for example), overlay prompt ("LD22 REQ", for example), or M1 message ("AMH0007", for example). You can either select text from the terminal screen and then select Help->Search, or select Help->Search and then type in the string to search for.

Figure 97
I/O Navigator Overlay Enhancer dialog box

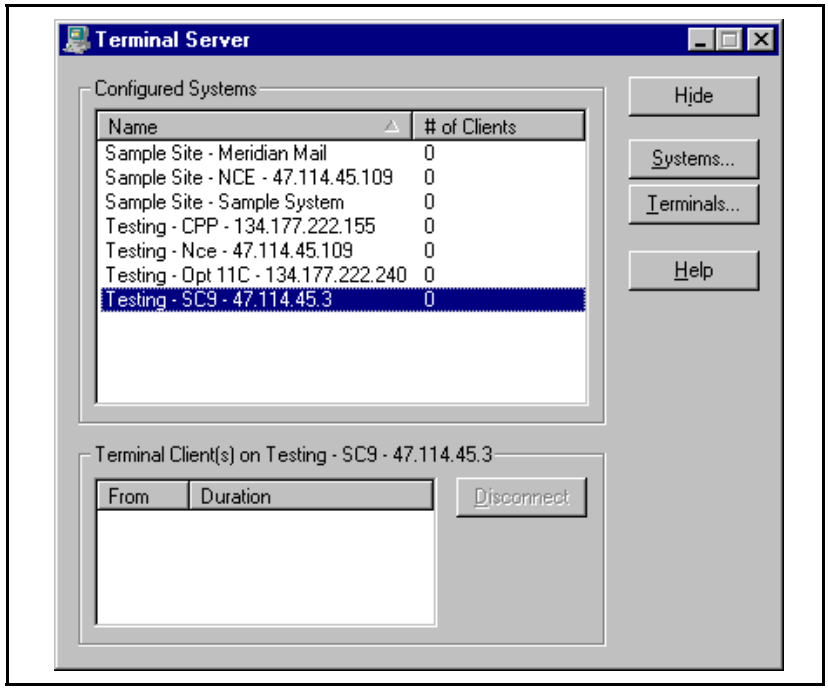


Terminal Server Setup

The Terminal Server application is a Windows application that uses the OTM database to obtain site, system, and IP address information. In the first release, the Terminal Server supports direct serial connections and M1 overlay connection over an IP network. If you connect over an IP network to a Meridian 1 you can customize the M1 port user types (SCH, MTC, BUG, TRF).

The terminal server is launched when the PC starts. Access it by double clicking an icon in the Task Bar Tray.

Figure 98
Terminal Server Window



The Terminal Server window displays two lists:

- configured systems
- configured ports

The configured systems list displays information on the virtual port that is configured:

- Name:
  As defined in the OTM Windows Navigator
- Number of clients:
  The number of terminal clients using the port

When you select an entry in the Configured Ports list, the Clients on Port list displays the following information for each terminal client using the port:

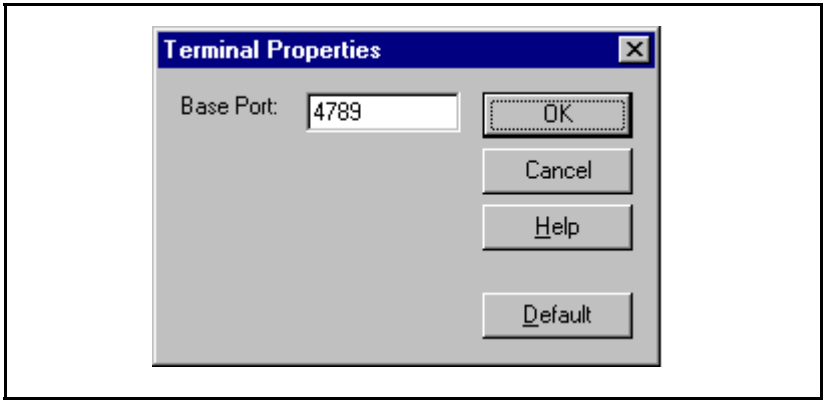
- From:
  IP address of the terminal client
- Duration:
  How long the connection has been in use

The Disconnect button next to the Clients on Port list allows you to terminate the connection to one or more terminal clients.

The Terminal Server application also has the following buttons:

- Exit - Terminate all existing client connections and exit the application. While the application is not running, a terminal client cannot connect to a host.
- Hide - Hide the application window. During normal operation, the Terminal Server application runs without user input, so hiding its window frees up some desktop space. You can view the window at any time by double clicking the Terminal Service icon in the Task Bar tray.
- Systems - Configure the virtual ports. See Virtual ports below.
- Terminals - Configure the starting network socket port number for communications between the OTM Server and the OTM Web System Terminal. The default is 4789. Typically you will not need to change this.
- Help - Get context-sensitive help on the application.

Figure 99
Terminal Properties dialog box



Virtual Ports

In the Terminal Server application, the Virtual Ports Properties window allows you to enable or disable connection to a particular device. It displays the virtual port number for each configured device, and the corresponding serial or network settings.

In the Virtual Port Properties window, a tree displays the devices that can be connected via a virtual port. For serial ports, the window retrieves the available serial ports from the Registry. For network connections, the window retrieves the site and system information from the OTM database. The virtual port for a system uses the same IP address assigned to System Terminal. The tree mirrors the tree in the OTM Navigator. It uses the communication profile in System Properties, determined as follows:

- For a Generic system, it uses the profile (serial or network) selected in the Application page in System Properties.
- For a non-Generic system, it uses the communication settings from the profile (serial or network) assigned to VT220 in the Applications page in System Properties.
- For a non-M1 system, if a network (Ethernet) profile is selected, Terminal Server uses a Telnet connection.

To configure virtual port connection for a device click the Systems button in Terminal Server window, or double-click a Configured System in the list (this selects the corresponding device in the Virtual Port Properties window allowing you to quickly change the settings for a particular device).

To enable virtual port connection for a device:

- Double-click the disabled port in the tree, or
- Select the item and check the Enabled checkbox., or
- Click the Enable All button. This enables all the items listed in the tree with the default configuration. The item becomes bold to show that it's enabled.

The field to the right of the Enabled checkbox automatically fills in the Site - System name for the selected device. This is the name displayed in the Terminal Server's main window.

To disable a virtual port:

1. Double-click an enabled item in the tree, or
   Select the item and uncheck the Enabled checkbox, or
2. Click the **Disable All** button. This disables all the devices listed in the tree. The item is no longer bold, and does not appear from the Terminal Server main window when you click **OK**.

Serial Connections

The Terminal Server application supports all the serial ports on the OTM server PC plus the systems configured in the OTM Navigator. However, while more than 8 serial ports may be configured, the Terminal Server is limited to 8 simultaneous serial connections. (The limit depends on the OTM server hardware, the network capacity, the server's CPU capacity, etc.)

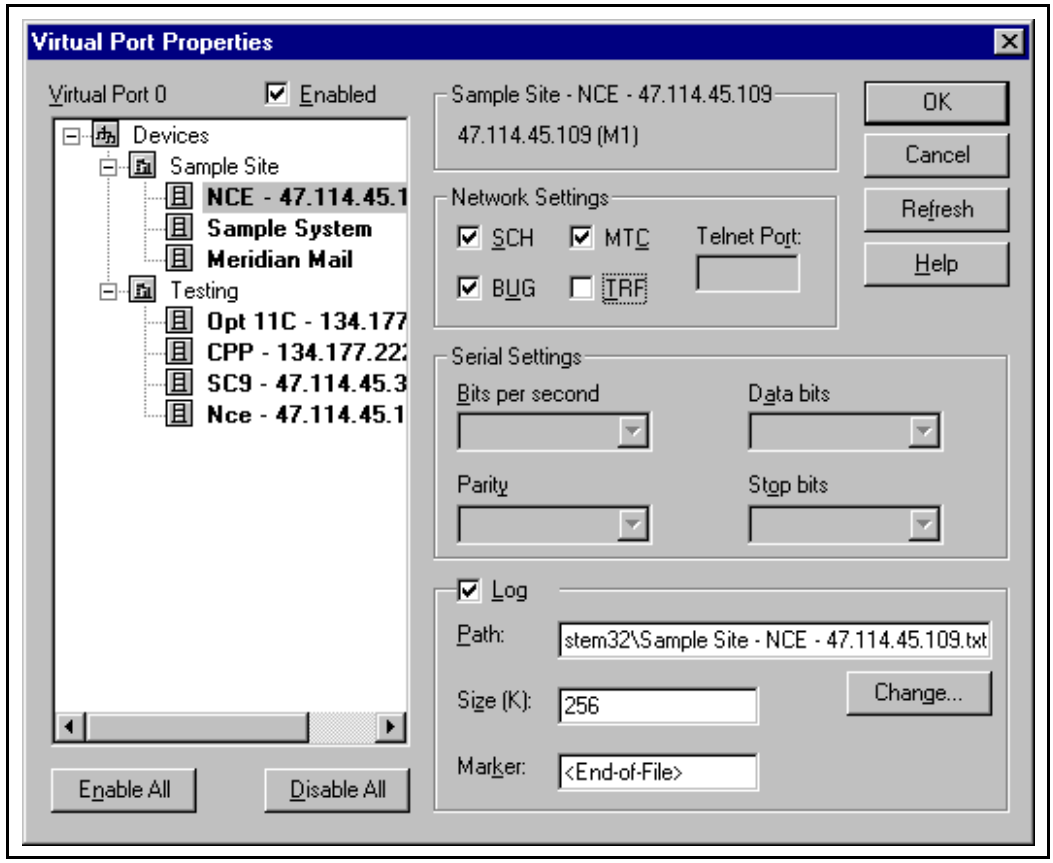
For a serial connection, Direct to Com x appears, where x is the comm port number. The fields for serial settings are enabled. The default is the serial settings from the OTM database. You can change the settings in the dialog box.

Network Connections

For a network connection, the IP address appears. It also appears whether the system is an M1 or Telnet.

- Make sure the IP address is correct. If the IP address is different from the OTM database's setting, click the Refresh button to update the all network ports with the latest settings from the OTM database.
- If you select an M1 System, the fields for M1 port settings are enabled (default = SCH). The Telnet port field is disabled.
- If you select a non-M1 System, the fields for both serial and M1 port settings are disabled. The Telnet port field is enabled.
- Check the Log checkbox to turn on data capture. The log file name defaults to the Site - System name plus a .txt extension. The path and the file name can be changed by typing in the edit box or clicking the Change button.

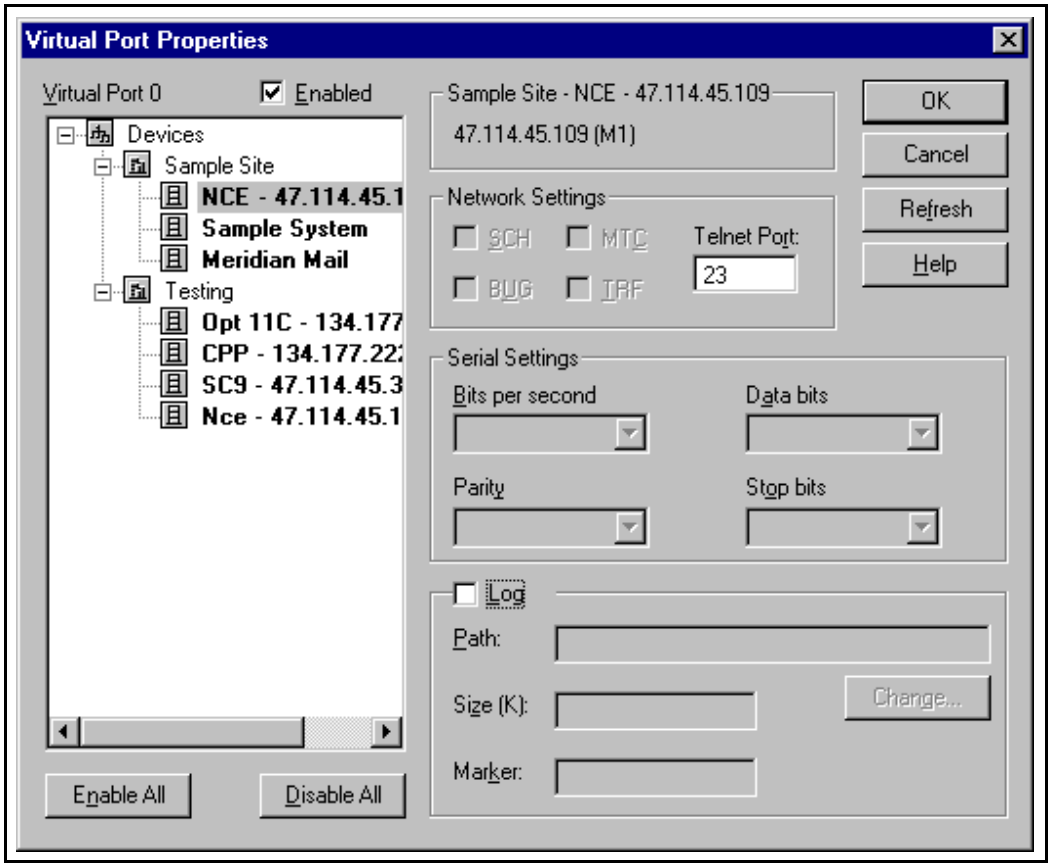
Figure 100
Virtual Port Properties (Serial with Logging enabled)



- The maximum size of the log file is customizable (in the Size field) on a per-system basis, and defaults to 256K. Once the file size reaches the limit, the Terminal Server starts from the beginning of the file, overwriting the oldest logs.
- Because of the circular nature of the log, the Terminal Server writes an end-of-file marker (customizable in the Marker field) at the end of the log entries.

- The log records the time and date of when a client connects and disconnects to the virtual port, and writes all text received from and sent to the host. This allows a network administrator to keep an activity log of the virtual port connection.
- If this ASCII log is to be viewed from a web browser, the file should be stored in a web-accessible path.

Figure 101
Virtual Port Properties (Network with Logging disabled)



Desktop Services

OTM Web Desktop Services allows end users to view the configuration of their telephone via a web browser.

The Web display includes a graphical view of the telephone, and shows the configured features. Help text is available for the features configured on the telephone. You will be able to restrict display of features (e.g. most Class of Services are irrelevant for end users).

Login Page

Login security ensures protection against unauthorized entry and enforces access privileges for logged on users.

When a user points a web browser to the OTM end user URL a login page appears. If login is successful, the user's personal Desktop Service main page appears.

Figure 102
User Login page

End User Main Page Layout

The Web Desktop Services end user main page includes the following common elements:

- **Information Banner** (top): Contains the Nortel logo, plus a Help, Logout, and Home button. The Help button takes you to general help on how to use these web pages. The Home button takes you to the My Profile page. The logout button takes you to the login page.
- **Navigation Bar** (left side): Lists hypertext links to various Desktop Service pages. When you single click on an item in the Navigation bar, the related page appears in the Content Frame of the standard Web page.
- **Note**: In the rare situations where a user has telephones on different switches managed by the OTM Server, the Navigation Tree expands to include the systems as the main nodes. The user selects the My Profile or Telephone(s) in the desired system.
- **Content Frame**: Contains the page based on the selection in the Navigation bar. There are three types of pages:

  Home page - general information about the user (name, department, etc.). The information displayed is determined by the administrator.

  Telephone pages - contains telephone configuration data. User may have more that one telephone. The information displayed is determined by the administrator.

  Other Links - contains links provided by the administrator.

A line is placed at the bottom of each content page to visually indicate the end of the page. If vertical or horizontal scrolling is required, the entire page is scrolled.

Home Page

Once logged in, a page appears containing general information about the user. The system retrieves this information from the OTM Directory. Click the Home button in the Banner or My Profile in the Navigation bar to take you to this page.

The information that appears is fixed and cannot be configured. If there is no information for a field, it is left blank.

- Employee first, middle, and last name
- Identification (employee ID)
- Job Title
- Org Path (this is extracted from the Organization Path in the OTM directory).
- Manager
- Email address

Figure 103
Home page

Telephone Pages

Once logged in, the user is presented with a list of telephones in the Navigation Bar. The telephones are identified by its prime DN. In order to get this list, the Web Server scans all the employee databases (one per Meridian 1) on the Server. If the employee has telephones in different systems, served by different OTM servers, then the employee will have to log in to the different servers.

When a user clicks on a telephone in the Navigation Bar, the telephone page appears in the Content Frame.

The telephone page has a small graphic in the top left corner. This graphic is detailed enough for the user to recognize the type of telephone. The user's name and the prime DN of the telephone also appear.

The telephone has up to four sub-pages, accessed by links below the small telephone graphic. The capabilities provided by these web pages depends on the telephone type.

Telephone General Page

The General Page provides general information about the telephone. The information that appears is fixed and you cannot configure it.

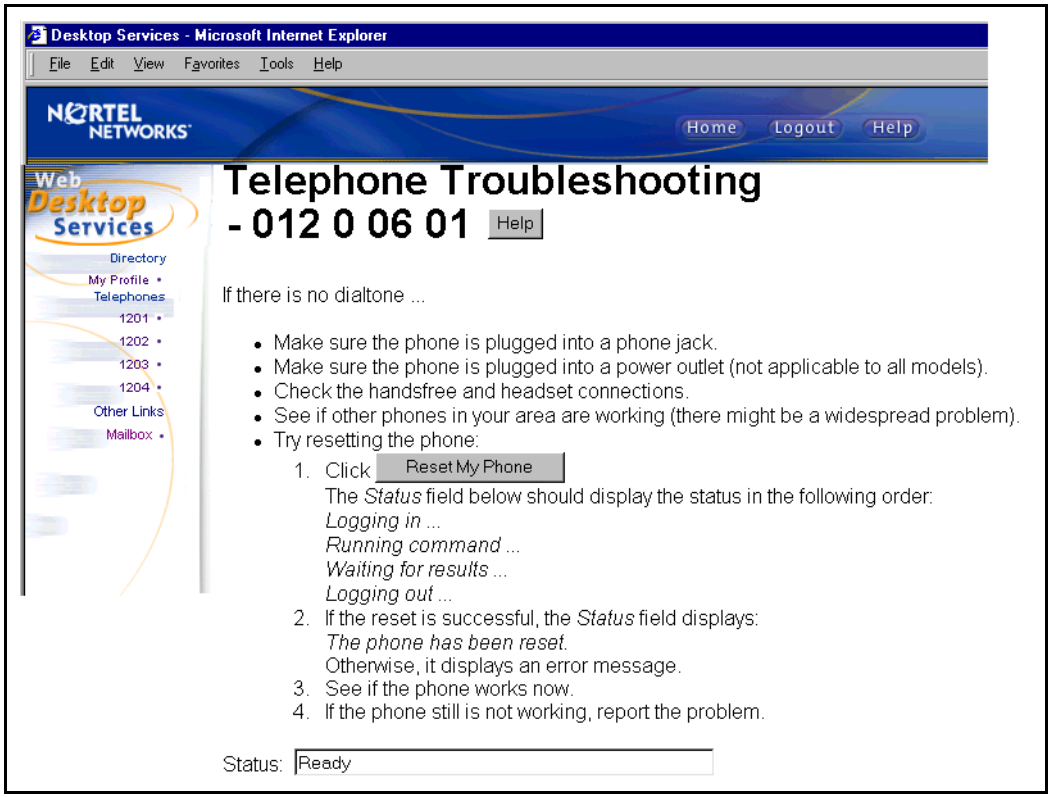
- **Station Location** - a text field similar in purpose to the System field. You may want to use this to provide more user friendly names.
- **Phone type** (M2317, M2616, etc.)
- **Terminal Number** (TN): Address of the telephone
- **System** - identifies the site, system, and customer number where the phone is connected. This information is retrieved from OTM common services. Displayed in the format "Site - System - Customer x".
- Add-on Key Modules
- **Designation** - a unique 1-8 character telephone identifier. This data is stored in station data and the overlays. Often used to identify the location of the phone within the building (for example, cable pair). Prompts DES in LD 10/11.
- A link is provided to a trouble shooting page. See page 252.

Figure 104
Telephone General page

Telephone Trouble Shooting page

You can access the Telephone Troubleshooting page from the General Page via a link. The Reset button performs an enable and status command on this telephone via a Maintenance Windows API.

Figure 105
Telephone Troubleshooting page


Desktop Services - Microsoft Internet Explorer
File Edit View Favorites Tools Help
NORTEL NETWORKS
Home Logout Help
Web Desktop Services
Directory
My Profile
Telephones
1201
1202
1203
1204
Other Links
Mailbox
Telephone Troubleshooting - 012 0 06 01
Help
If there is no dialtone ...
Make sure the phone is plugged into a phone jack.
Make sure the phone is plugged into a power outlet (not applicable to all models).
Check the handsfree and headset connections.
See if other phones in your area are working (there might be a widespread problem).
Try resetting the phone:
1. Click Reset My Phone
The Status field below should display the status in the following order:
Logging in ...
Running command ...
Waiting for results ...
Logging out ...
2. If the reset is successful, the Status field displays:
The phone has been reset.
Otherwise, it displays an error message.
3. See if the phone works now.
4. If the phone still is not working, report the problem.
Status: Ready

Telephone Keys Page

The Telephone Keys page displays a graphical layout of the function keys assigned to the telephone. The layout varies for different telephone types.

All current feature key assignments will always be visible. The key labels on the graphic match the labels in Station Administration. For 3900 series telephones these match the soft labels on the set and the text is shortened to 7 characters. When the page first appears, key 0 is selected. You can select other keys by clicking on a key.

When a key is selected the following occurs:

- The key is highlighted (method depends on phone type).
- The name of the key and its configurable parameters (if any) are displayed beside the telephone graphic.

If the telephone has Add-On Key Modules, a graphic indicates which set of keys is displayed. You can "scroll" the graphic from one set of keys to another.

A Help button takes you to help on how to use the selected key.

Figure 106
Telephone keys page

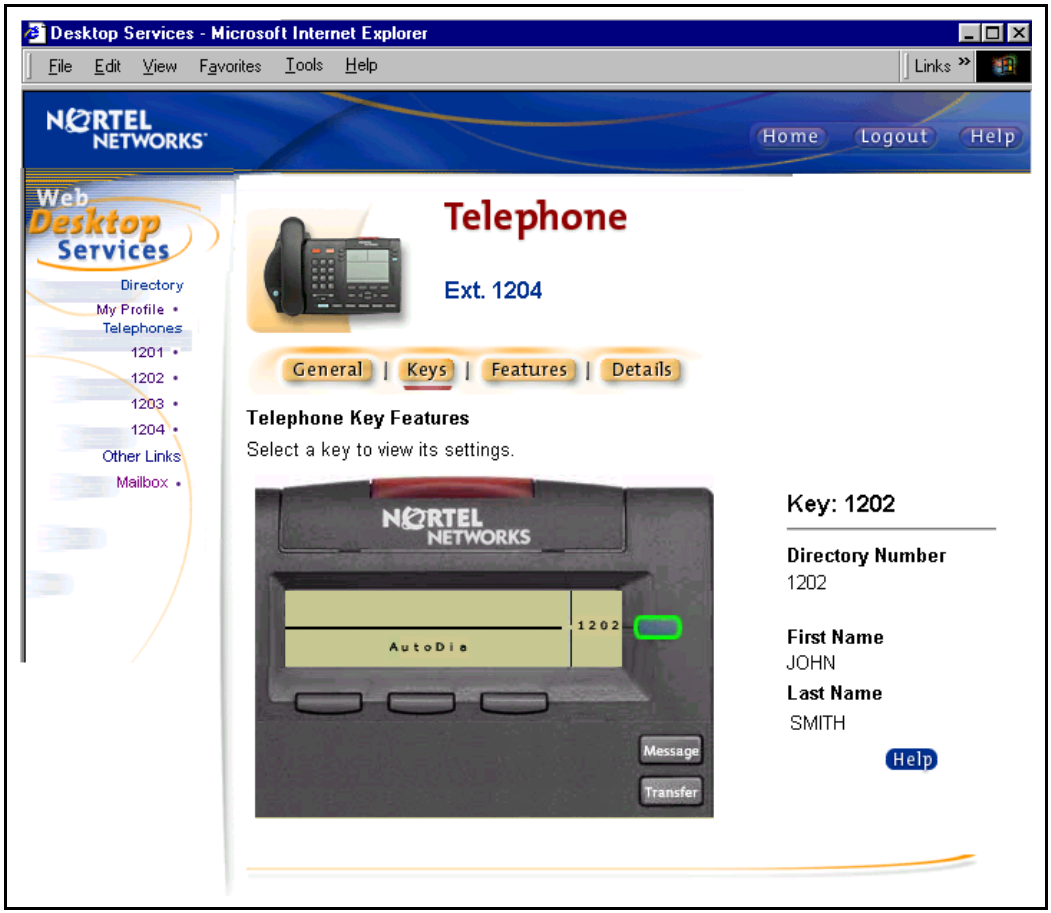
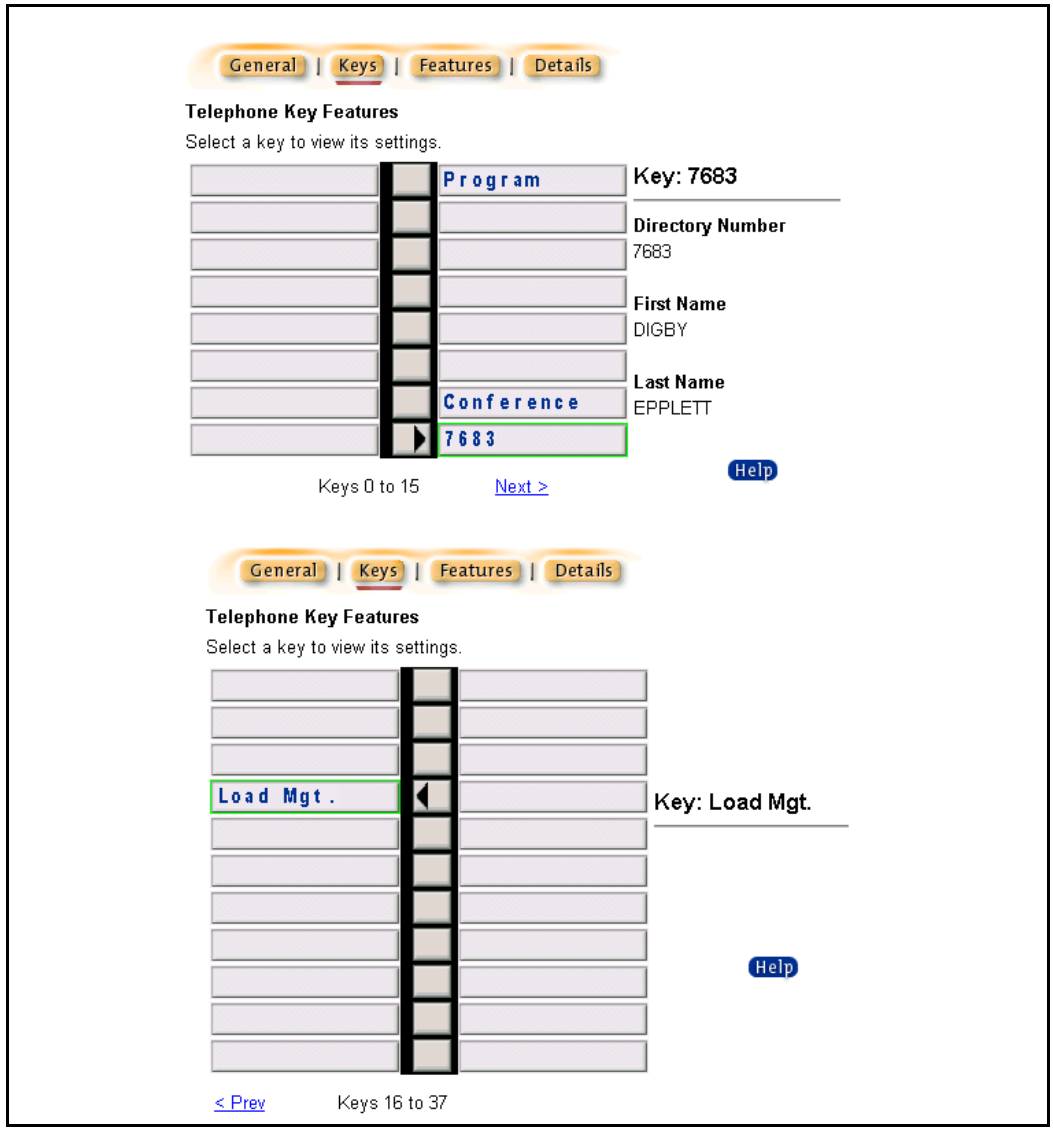


Figure 107 shows the UI for Add on Key modules on an M2616 telephone. Click the next/prev links to navigate between the banks of keys.

Figure 107
Telephone Keys page with Add on Keys



Telephone Features page

The Telephone Features page allows you to view and change features that are not assigned to keys. Features are related to individual prompts in LD 10 or 11, with one or more configurable parameters.

The drop down list contains the list of features. When you select a feature, the appropriate information appears. The Help button takes you to help on how to configure that feature group.

The administrator determines which features the user can see in the drop down list.

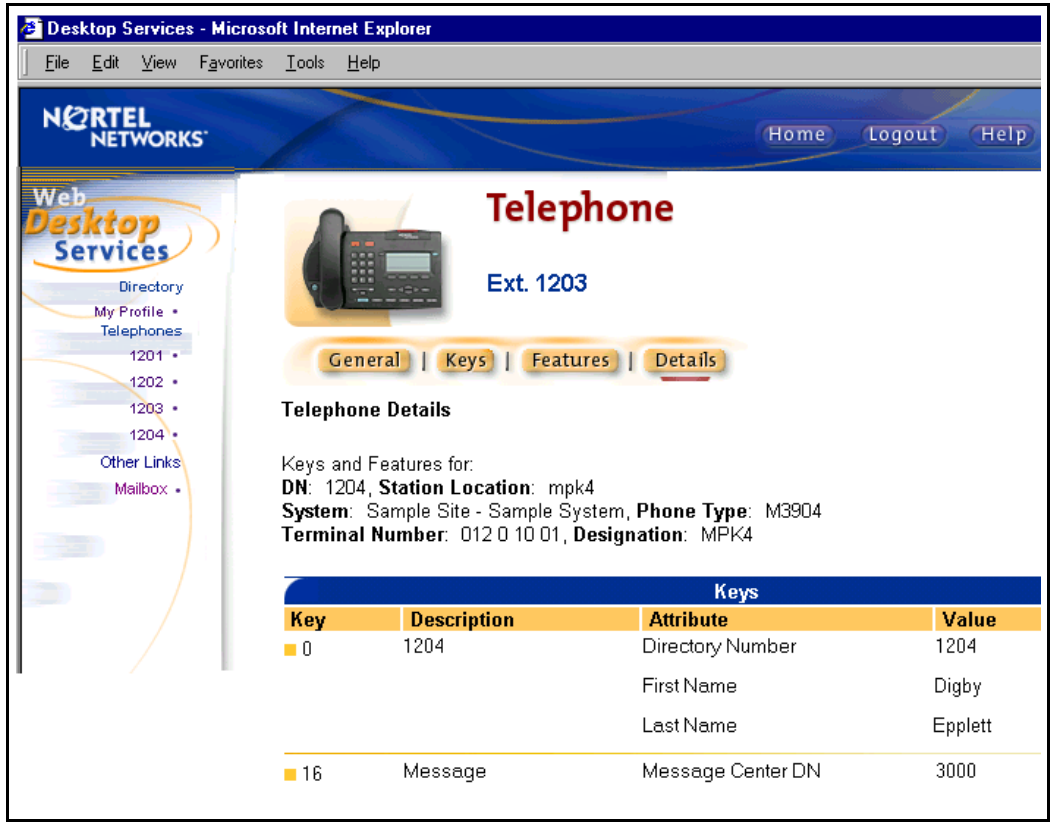
Figure 108
Telephone Features page

Telephone Details page

The Telephone Details page provides a summary of the complete telephone

configuration. It consists of two tables, one for the keys and one for the features.

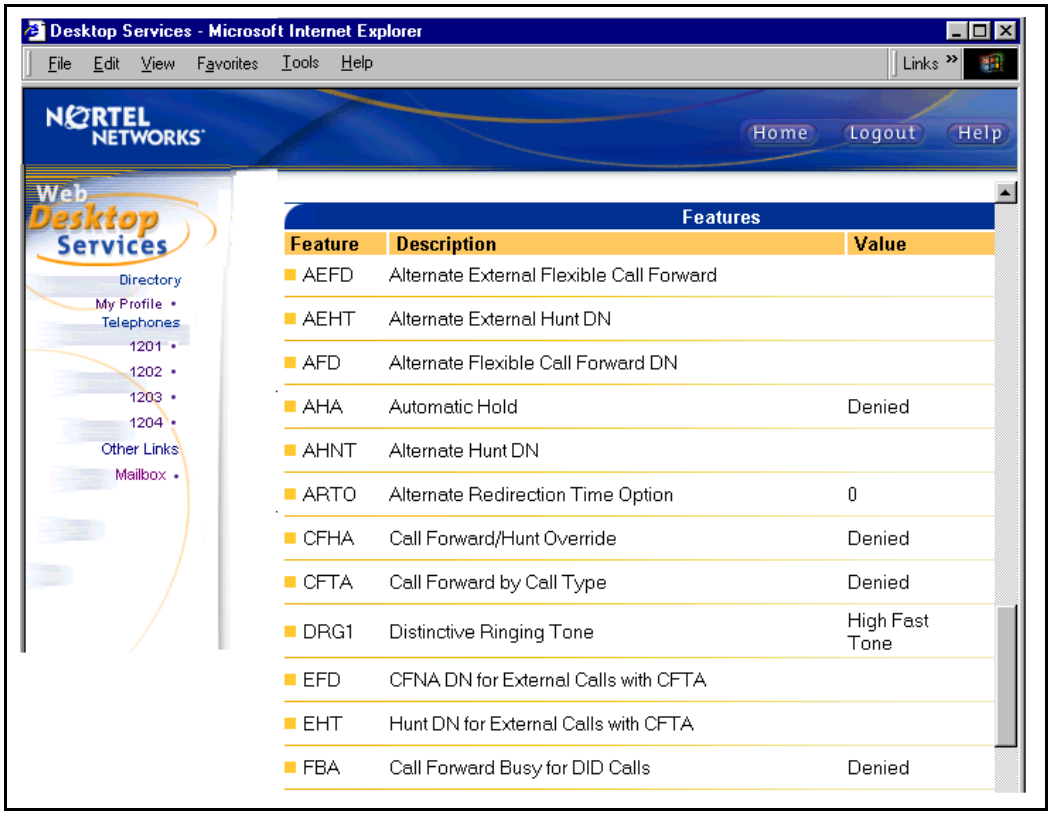
Figure 109
Telephone Details layout (page 1)



Other Links

You can define the Other Links button of the Navigation bar. If you do not define links, then this section is not visible. To define Other Links edit the HTML file as shown in Figure 111. The file is located in: "<Nortel>\OMServices\OMStation\EndUser\Eng"

Figure 110
Telephone Details layout (page 2)



Meridian Mail

One possible item which could go into the Other Links section is a link to Personal Mailbox Administration (PMA). This link takes the user to the URL for logging into the Meridian Mail web pages. The user must enter the mailbox number and password to proceed. Once logged in, the user can view and change their mailbox configuration. This feature is available with Meridian Mail 13 and later releases.

Figure 111
Other Links

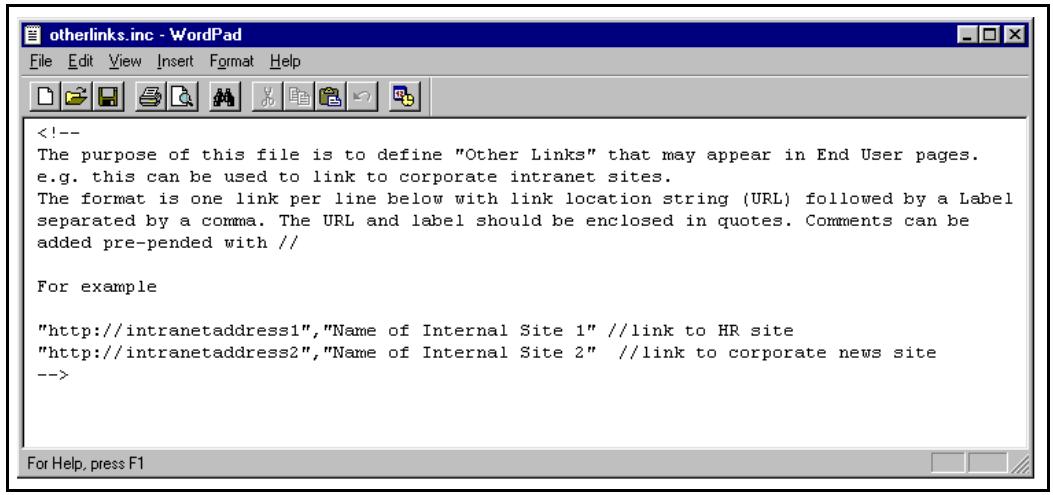

otherlinks.inc - WordPad
File Edit View Insert Format Help
<!--
The purpose of this file is to define "Other Links" that may appear in End User pages.
e.g. this can be used to link to corporate intranet sites.
The format is one link per line below with link location string (URL) followed by a Label
separated by a comma. The URL and label should be enclosed in quotes. Comments can be
added pre-pended with //
For example
"http://intranetaddress1","Name of Internal Site 1" //link to HR site
"http://intranetaddress2","Name of Internal Site 2" //link to corporate news site
-->
For Help, press F1

Figure 112
Meridian Mail Login

Data Buffering and Access

The OTM Data Buffering and Access (DBA) and M1 Database Disaster Recovery applications provide a Windows interface to start a live data buffering session and define the session properties for collecting data from a Meridian 1. A network or PPP connection allows collection of CDR and Traffic data. A serial connection allows collection of ASCII data only.

With a PPP or network connection, you can perform the following tasks:

- Schedule a single or routine backup of your Meridian 1 data base files. On an Option 11C system, schedule the retrieval of buffered CDR and Traffic data from the Meridian 1 to the PC.
- View collected CDR and Traffic data.
- Backup and restore a Meridian 1 data base to and from a remote device for data base recovery.

If you lose a connection or have connection problems during a live data session, the Meridian 1 saves the CDR and Traffic data. You can retrieve the data when the connection is restored.

With a serial connection, you can perform the following tasks:

- Set up the actions and rules for generating alarms.

  Note: A serial connection does not support the DBA Backup and Restore functions.

- View collected serial data.

If you lose a connection or have connection problems during a live serial data session, data will be lost.

Use the DBA application to schedule the following tasks:

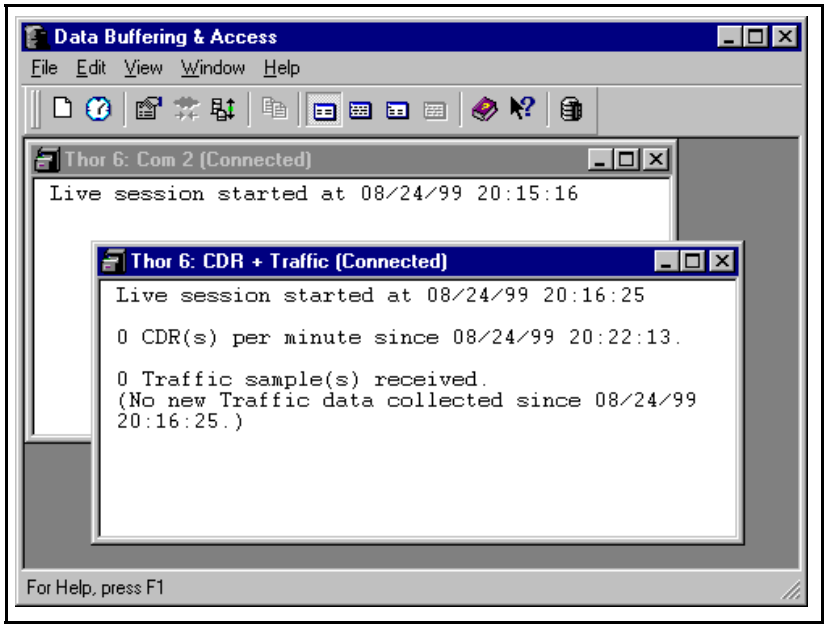
- Archive CDR and Traffic from the M1.
- Perform M1 Database Disaster Recovery (back up only).

Access DBA

To access DBA, select **Data Buffering and Access** from the Utilities menu in the OTM Navigator window.

The DBA main window appears. (See Figure 113.)

Figure 113
DBA Main window


Data Buffering & Access
File Edit View Window Help
Thor 6: Com 2 (Connected)
Live session started at 08/24/99 20:15:16
Thor 6: CDR + Traffic (Connected)
Live session started at 08/24/99 20:16:25
0 CDR(s) per minute since 08/24/99 20:22:13.
0 Traffic sample(s) received.
(No new Traffic data collected since 08/24/99 20:16:25.)
For Help, press F1

DBA menus

Descriptions of each command in the DBA menus are available online. Use the Help command to get detailed descriptions of the commands.

DBA Toolbar

The DBA Toolbar provides easy access to many of the menu commands.

Right-click the mouse in the session window to view the pop up menu containing a subset of the menu items.

Start a new live data session

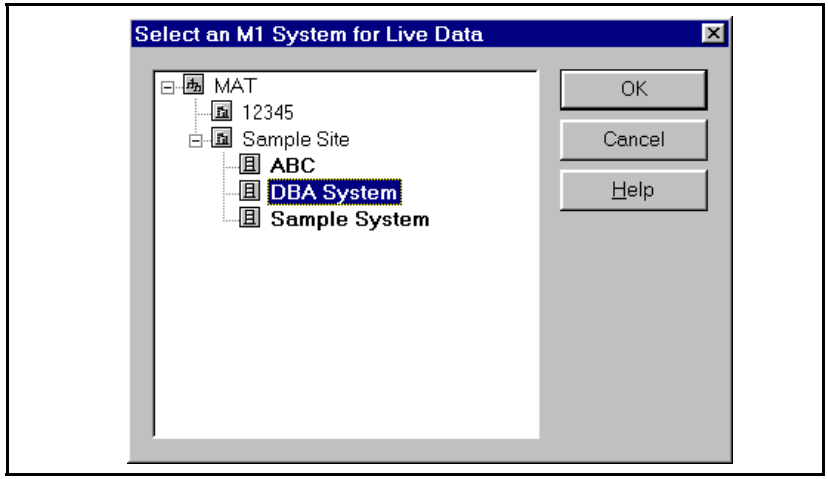
To collect live data, you must start and configure a live data session (an active connection to a Meridian 1 system). The DBA application runs continuously during the session, providing access for session configuration and a window for monitoring session information. Special operations, such as Meridian 1 data base backup, can be run immediately or scheduled to run within a session.

> ***Note:*** To maintain a live data session, you must keep the DBA main window open continuously. To minimize screen congestion, hide the DBA main window to remove it from the Windows Desktop. See "Hide and restore the DBA main window" on page 281.

1 Select New Session from the File menu in the DBA main window.

The Select an M1 System for Live Data dialog box opens. (See Figure 114.)

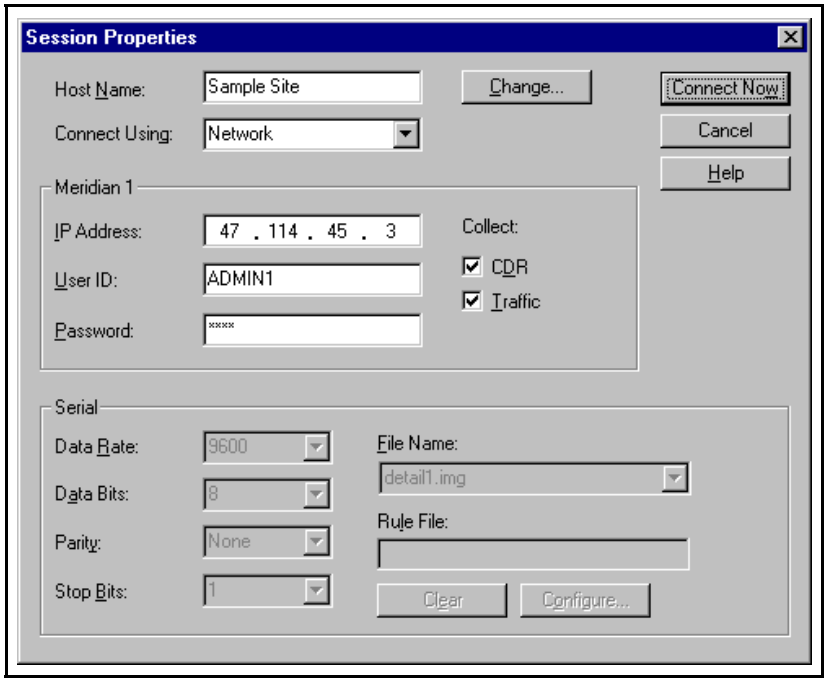
Figure 114
Select an M1 System for Live Data dialog box



2 Select the M1 system for the session from the tree and click **OK**, or double-click the selected system.

The Session Properties dialog box opens. (See Figure 115.)

Figure 115
Session Properties dialog box



Define session properties for a network connection

Session properties for a network connection are defined as follows:

1 (Required) The name of the selected M1 system appears in the **Host Name** box.

Note: To change your system selection, click **Change** to return to the Select an M1 System for Live Data dialog box.

2 (Required) Select network connection in the **Connect Using** box.

3 (Required) The IP address for the selected M1 system appears in the **IP Address** box.

4 (Optional) Enter your M1 log in name in the **User ID** box.

5 (Required) Enter your M1 log in password in the **Password** box.

Note: The **Host Name**, **IP Address**, **User ID**, and **Password** data exist for the selected Meridian 1 system in OTM Navigator. The DBA application automatically fills these fields with values from the OTM data base. Any changes made in this dialog box are temporary and lost when the session window closes.

6 Check the **Collect** boxes to select the types of data (**CDR** and/or **Traffic**) that DBA will buffer.

7 Select **Connect Now** to connect to the selected M1 system and begin a live data session.

If you do not buffer all available data types, a dialog box appears asking you to confirm your selection.

A new window opens within your DBA main window. The host name of the connected M1 system appears on the title bar. DBA uses this session window to provide information about the live data session. (See "View session data" on page 278.)

Leave the session window open to maintain the live data session. If you close the window, the live session terminates. If the session terminates, the Meridian 1 system begins sending buffered data to one of the following devices, depending on the session parameters you set when establishing the connection:

- Hard drive (large systems). Not recommended for large systems.
- PCMCIA card (Option 11C)

Define session properties for a serial connection

Session properties for a serial connection are defined as follows:

1 (Required) The name of the selected M1 system appears in the **Host Name** box.

Note: To change your system selection, click **Change** to return to the Select an M1 System for Live Data dialog box.

2 (Required) Select serial port connection in the **Connect Using** box.

Note: If you select a serial connection, use the Rules Manager window to define the actions taken when a specific data pattern appears in the data stream. See "Configure Actions and Rules" on page 266.

3 Select the data rate for the connection in the **Data Rate** box.

4 Select the data bit setting for the connection in the **Data Bits** box.

5 Select the parity setting for the connection in the **Parity** box.

6 Select the stop bits for the connection in the **Stop Bits** box.

7 Enter the name of the file to store data collected from the serial port in the **File Name** box. The file exists under the selected site and system. Enter a new file name or select one of the following files from the drop down list.

- **detail1.img** - File used for CDR data.
- **traffic.dmp** - File used for Traffic data.

8 **Rule File** is a read only field containing the name of the rules file for this DBA session. Edit the field with the **Clear** and **Configure** buttons.

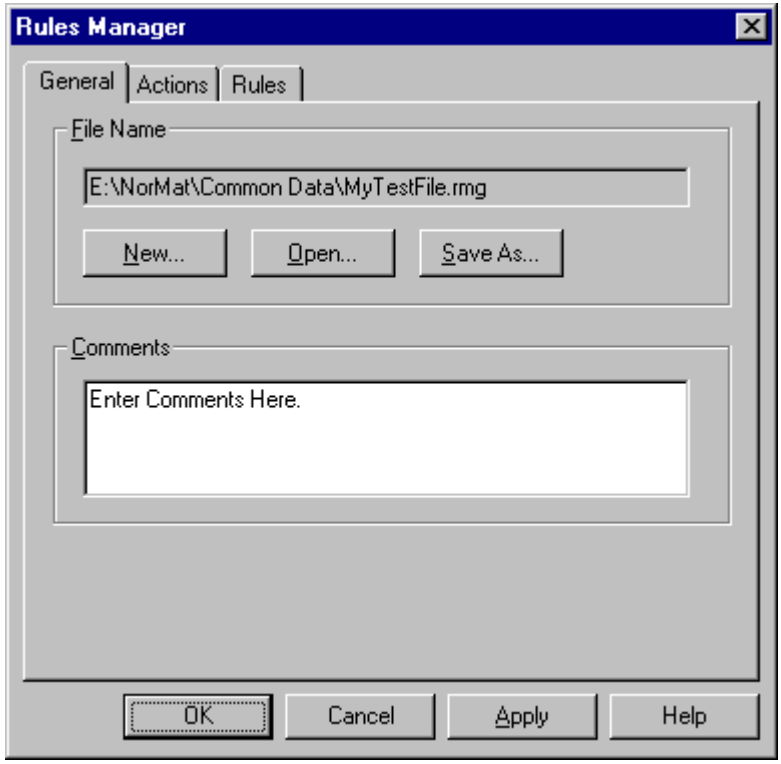
- **Clear** - Removes the file name from the Rule File field
- **Configure** - Opens the Rules Manager window shown in Figure 116. You can create a new rules file or open and edit an existing rules file. If you create a new rules file, you must define the actions taken when a specific data pattern appears in the data stream. See “Configure Actions and Rules” on page 266.

Configure Actions and Rules

Actions and rules are configured for serial connections. The Rules Manager window allows you to:

- Define the file you want to save or load into the Rules Manager
- Configure new actions or update or delete existing actions
- Configure new rules or update or delete rules, and set the order for applying rules.

Figure 116
Rules Manager—General tab



Define the Rules Configurations file

Use The General tab to select the rules configuration file you want to save and load into the Rules Manager. See Figure 116.

1 The **File Name** box is a read only field displaying the path and file name of the current rules configuration file. To use a different rules configuration file, click on one of the following buttons:

- **New** - Resets the Rules Manager dialog box to blank. If changes have been made to the current configuration, you are prompted to save the changes.
- **Open** - Opens the standard file dialog box, which allows you to select a rules configuration file. If you change the current configuration, you are prompted to save the changes.
- **Save As** - Opens the standard file dialog box allowing you to save an existing rules configurations file under another file name. Enter the new name and click the Save button. The Rules Manager window appears with the name of the file in the File Name box.

2 After you define the configurations file, use one of the following buttons:

- **OK** - Saves the rules configuration file and closes the Rules Manager window.
- **Cancel** - Discards any changes to the rules configuration file and closes the Rules Manager window.
- **Apply** - Saves the rules configuration file. The file remains open in the Rules Manager window, allowing you to make changes to the file.
- **Help** - Displays online help.

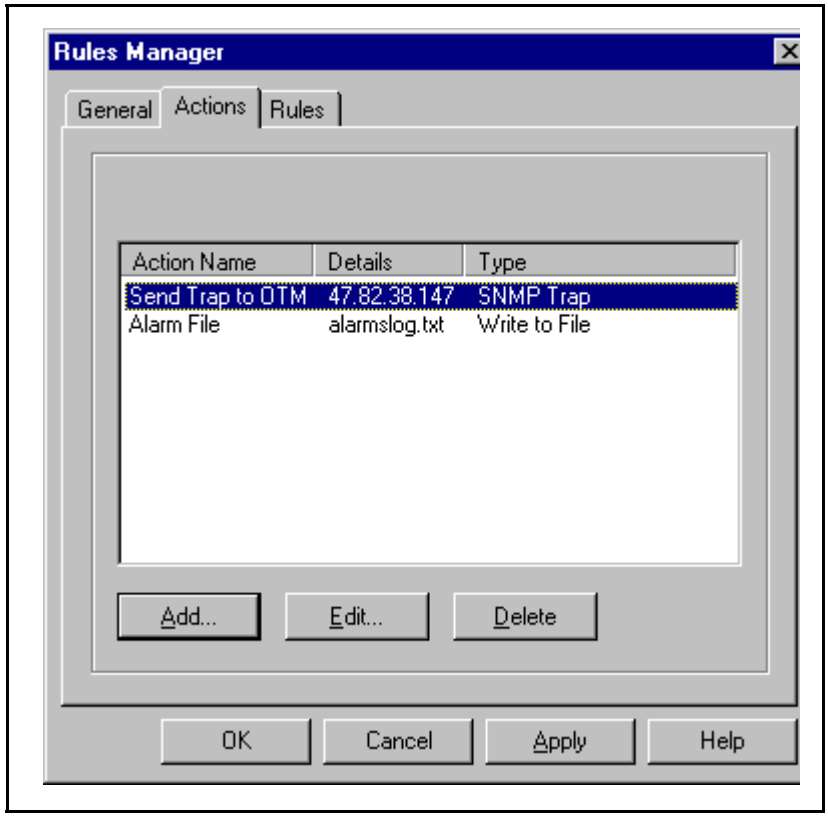
Configured Actions

Use the Actions tab to define new actions or update or delete existing actions. See Figure 117.

1 Select an action from the displayed list and click one of the following buttons.

- **Add** - Opens the New Action dialog box shown in Figure 118. See “Define a New Action” on page 270.
- **Edit** - Opens the dialog box to edit configurations for the selected action.
- **Delete** - Select the action and click the Delete button to delete the action.

Figure 117
Rules Manager—Actions Tab



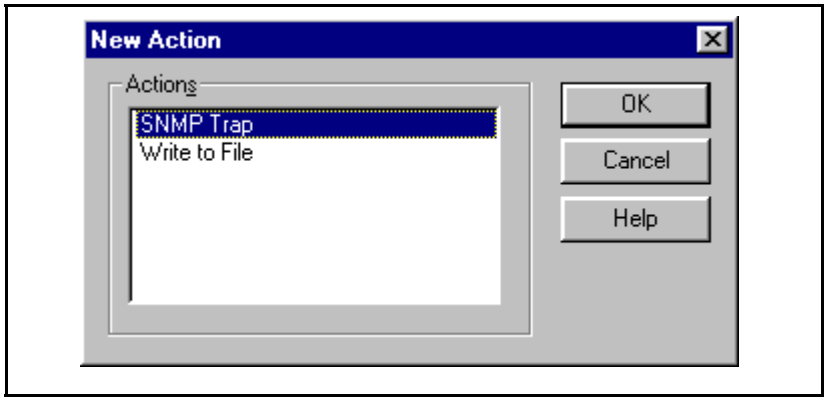
2 After you define the actions, use one of the following buttons:

- **OK** - Saves the actions in the configuration file and close the Rules Manager window.
- **Cancel** - Discards any changes to the actions and closes the Rules Manager window.
- **Apply** - Saves the actions in the configuration file. The file remains open in the Rules Manager window, allowing you to make changes to the file.

Define a New Action

The New Action dialog box shown in Figure 118 provides a list of configurations you can apply to the selected action. You can configure the SNMP trap and Write to File actions. Based on the configuration you select, another dialog box such as, SNMP Trap, displays for you to define the configuration for the action.

Figure 118
New Action dialog box

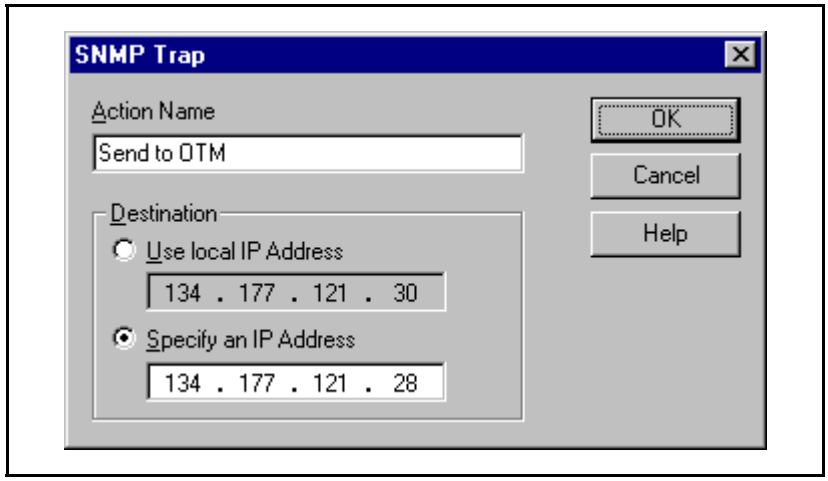


SNMP Trap dialog box

The SNMP Trap dialog box shown in Figure 119 defines the destination for the SNMP Trap action. Select the radio button for the destination of the trap. The valid selections are a local IP address or a user defined address. The destination address must be running an application capable of taking the SNMP trap sent from DBA. When you select a local IP address (the default) sends all traps to the same system running DBA and the Trap Server.

The local IP address does not exist in the Rules Manager configurations file. You can change the local IP address without resetting the value in the defined action in the configuration file.

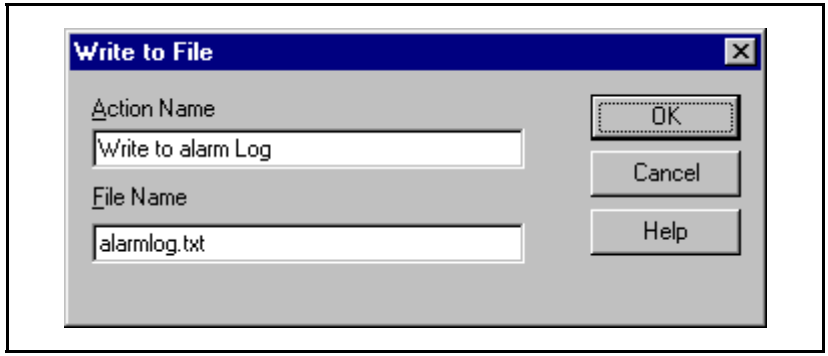
Figure 119
SNMP Trap dialog box



Write to File dialog box

The Write to File dialog box shown in Figure 120 allows you to define the destination for a Write to File action. Enter a name for the action and the name of the file for storing the action. The file is in the OTM Common Data Directory in the system level folder. Because the file exists in the common data directory, multiple sessions defined for different sites and systems can use the same Rules Manager file. You can copy the file to another OTM system.

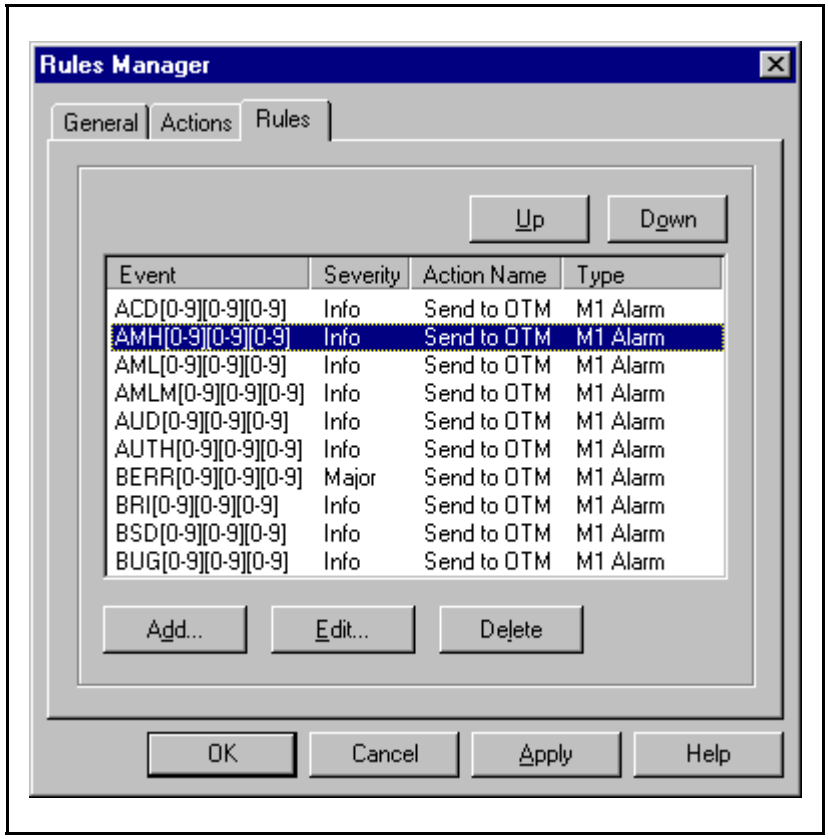
Figure 120
Write to File dialog box



Configure Rules

Use the Rules tab to define new rules, update or delete rules, and set the order for applying rules to the data stream. See Figure 121.

Figure 121
Rules Manager—Rules Tab



1 Select an event from the displayed list and click one of the following buttons.

- **Up** or **Down** - Moves the selected event up or down one position in the list.
- **Add** - Opens the New Rule dialog box shown in Figure 122. See “Define a New Rule” on page 273.

- **Edit** - Opens the dialog box to change the selected rule.
- **Delete** - Select the event and click the Delete button to delete the rule.

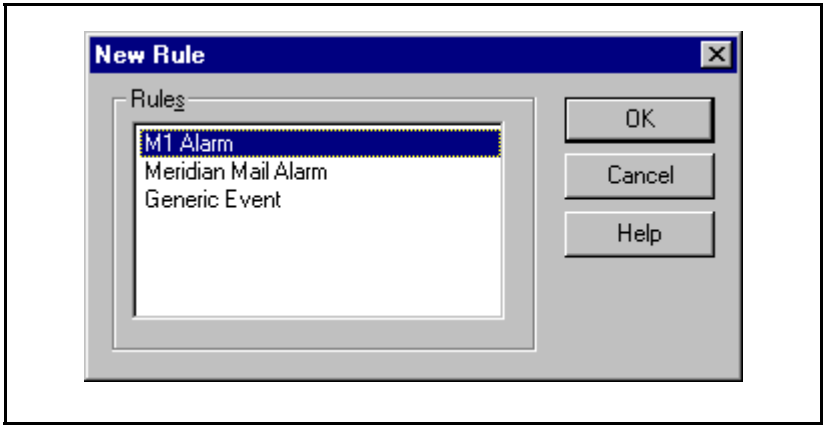
2 After you define the rules, use one of the following buttons:

- **OK** - Saves the rules in the configuration file and close the Rules Manager window.
- **Cancel** - Discards any changes to the rules and closes the Rules Manager window.
- **Apply** - Saves the rules in the configuration file. The file remains open in the Rules Manager window, allowing you to make changes to the file.

Define a New Rule

The New Rule dialog box shown in Figure 122 provides a list of the types of rules you can define. You can configure the rules for an M1 Alarm, Meridian Mail Alarm, or a generic event. For example, an M1 Alarm rule can match an M1 alarm code. A match records the data provided with the alarm. A rule for a generic event is for a system other than those listed.

Figure 122
New Rule dialog box



M1 Alarm dialog box

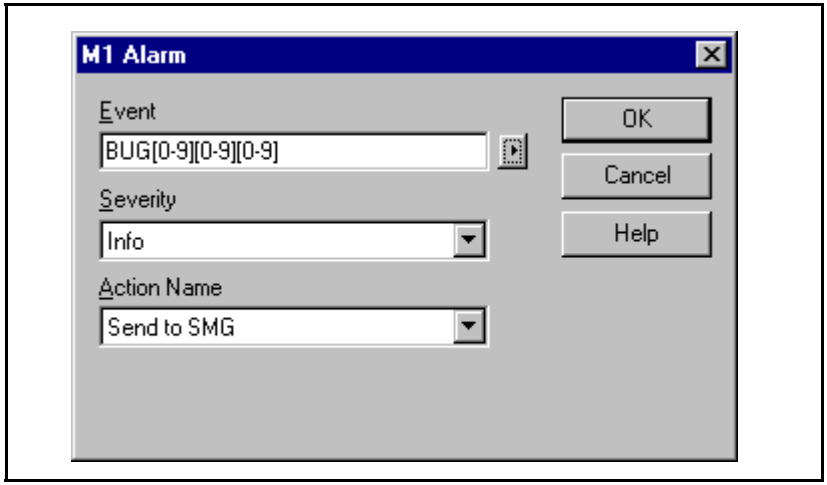
The M1 Alarm dialog box shown in Figure 123 defines the values for an M1 Alarm rule.

The *Event* edit box defines the text that will be used to determine if a match is found in the data stream. The *Event* field excepts regular expressions for performing complex text comparisons. The menu button beside the field provides a list of regular expression options. See Regular Expression Menu Button for more details.

The *Severity* field contains a list of predefined severity values. The values provided are Info, Warning, Minor, Major, Critical and Clear. The default value is Info.

The *Action Name* field contains a list of actions by action name. This list is dynamically created using the actions defined on the Actions page of the Configuration Property Sheet. The default value is blank meaning no action will occur if an event match occurs.

Figure 123
M1 Alarm dialog box



Meridian Mail Alarm dialog box

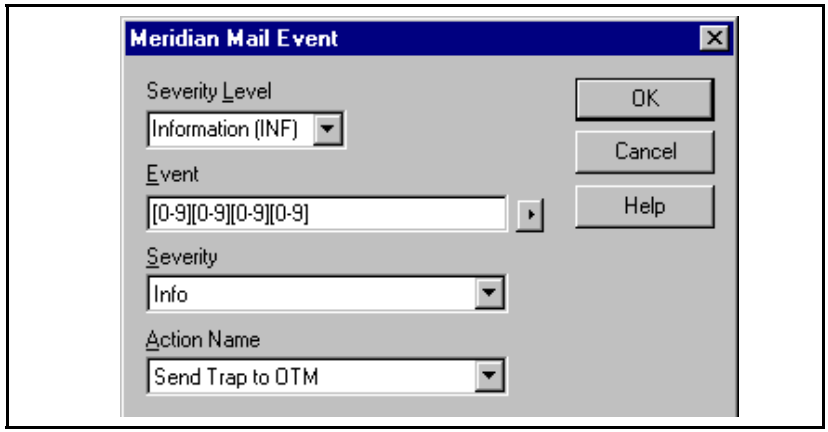
The Meridian Mail Alarm dialog box shown in Figure 123 defines the values for a Meridian Mail Alarm rule. The *Severity Level* field contains a list of predefined severity levels. The values provided are Information (INF), Minor (*), Major (**), Critical (***), Clear (OFF) and All. This allows the user to define the Meridian Mail severity level in the data stream, which is used in addition to the Event, to determine if a match is found. The option to chose All for severity level was added to allow the user to match the event regardless of the severity level sent from Meridian Mail.

The *Event* field defines the text that will be used to determine if a match is found in the data stream. The *Event* field excepts regular expressions for performing complex text comparisons. The menu button beside the field provides a list of regular expression options. See Regular Expression Menu Button for more details.

The *Severity* field contains a list of predefined severity values. The values provided are Info, Warning, Minor, Major, Critical and Clear. The default value is Info.

The *Action Name* field contains a list of actions by action name. This list is dynamically created using the actions defined on the Actions page of the Configuration Property Sheet. The default value is blank meaning no action will occur if an event match occurs.

Figure 124
Meridian Mail Alarm dialog box



Generic Event dialog box

The Generic Event dialog box in Figure 125 allows you to define the values for a generic event rule. Generic systems are not Meridian 1 systems.

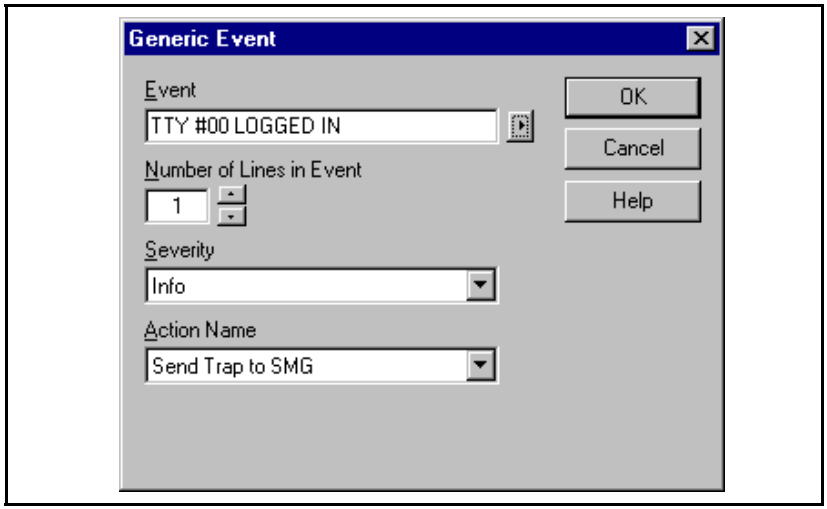
The *Event* edit box defines the text that will be used to determine if a match is found in the data stream. The *Event* field accepts regular expressions for performing complex text comparisons. The menu button beside the field provides a list of regular expression options. See Regular Expression Menu Button for more details.

The Number of Lines in Event field defines the number of lines in the data stream to capture. The values are 1 to 5 (0 is the default). A value of zero records the event only.

The *Severity* field contains a list of predefined severity values. The values provided are Info, Warning, Minor, Major, Critical and Clear. The default value is Info.

The *Action Name* field contains a list of actions by action name. This list is dynamically created using the actions defined on the Actions page of the Configuration Property Sheet. The default value is blank, which means that no action will occur if an event match occurs.

Figure 125
Generic Event dialog box



Schedule a Backup or Retrieval

DBA allows you to schedule a single or routine backup of your Meridian 1 data base files. On an Option 11C system, you can schedule the retrieval of buffered CDR and Traffic data from the Meridian 1 system to the PC.

The following procedure describes how to schedule either operation in DBA.

Note: A scheduled job does not configure the M1. Use the correct LD 117 settings (DBK and BUF) for the M1.

1 Select **Schedule** from the File menu in the DBA main window.

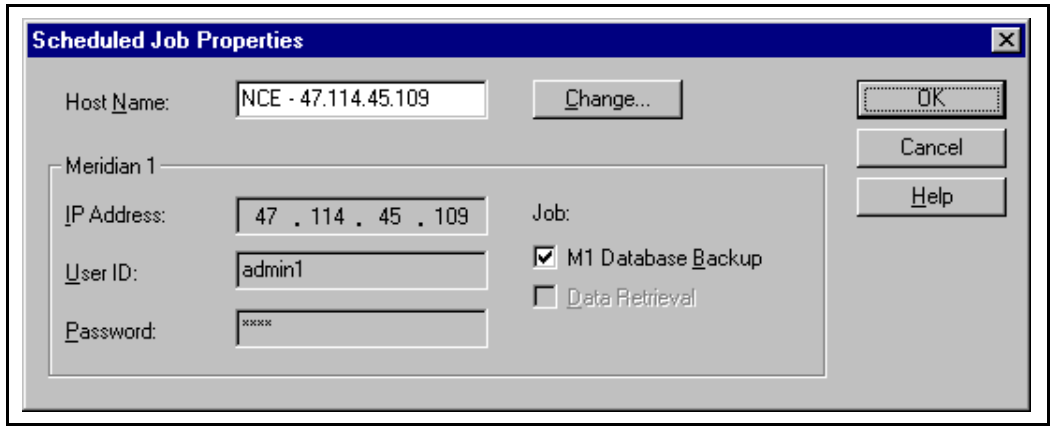
The Select an M1 System for Scheduling dialog box opens.

2 Use the dialog box tree to select the M1 system you want to schedule.

3 Click **OK**, or double-click on the selected system, to confirm your selection.

The Scheduled Job Properties dialog box opens. (See Figure 126.)

Figure 126
Scheduled Job Properties dialog box



4 To change your system selection, click on **Change** to return to the last dialog box.

5 (Optional) Enter the **Host Name** of the System in the indicated field.

Note: The **Host Name**, **IP Address**, **User ID**, and **Password** data for the selected Meridian 1 system are stored in the OTM data base. The DBA application automatically fills these fields with the values from the OTM data base. In the Scheduled Job Properties dialog box, these fields are read-only. If the values are not correct, enter the correct values in the OTM Navigator System Properties.

6 Click on the check box of the operation you want to schedule:

- **M1 Database Backup -** back up Meridian 1 data base files.
- **Data Retrieval -** retrieve buffered CDR and Traffic data from the Meridian 1 system.

Note:The Data Retrieval check box only functions for an Option 11C system.

7 Click **OK** to confirm your settings.

The Scheduling dialog box opens. See Figure 127.

8 Schedule the job by completing the items in the Scheduling dialog box and clicking the OK button.

View session data

In a live session, you can view the collected CDR, Traffic, and serial data, and the session data collection statistics. (See Figure 128)

From the View menu, select one of the following:

- **CDR Data** to display a snapshot of CDR data collected by DBA (up to the last 15 minutes).
- **TRF Data** to display a snapshot of Traffic data collected by DBA (up to the last 15 minutes).
- **Statistics** to display the average number of CDRs per minute, the time of the last Traffic Sample, and the time of the last serial data connection.
- **Refresh** to update CDR, Traffic, and serial data views with the latest collected data.

Figure 127
Scheduling dialog box

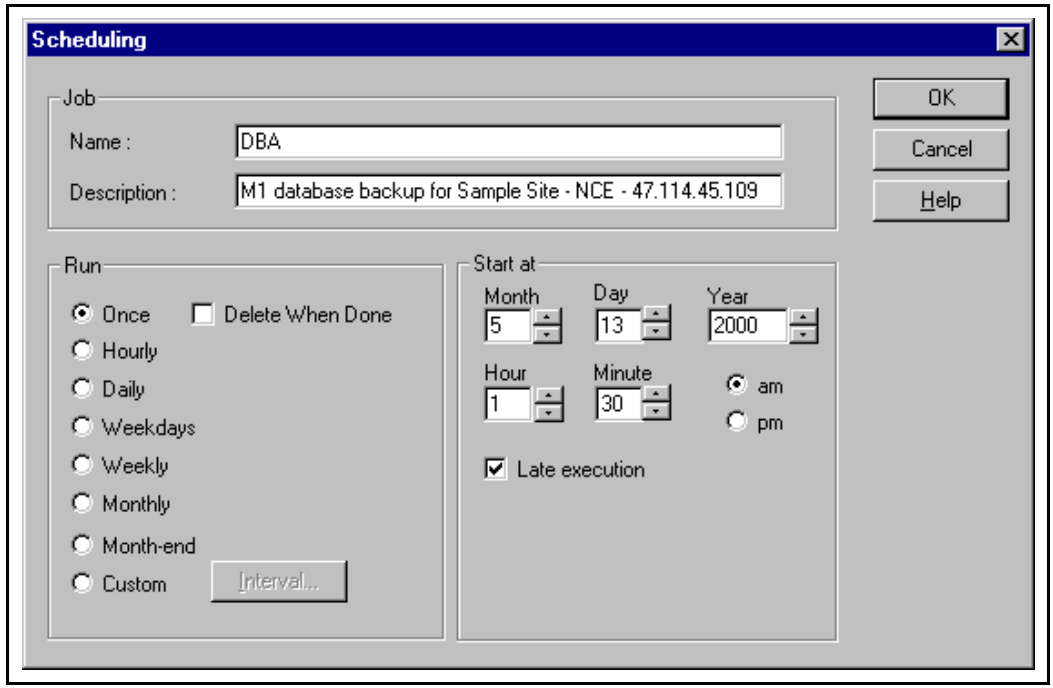
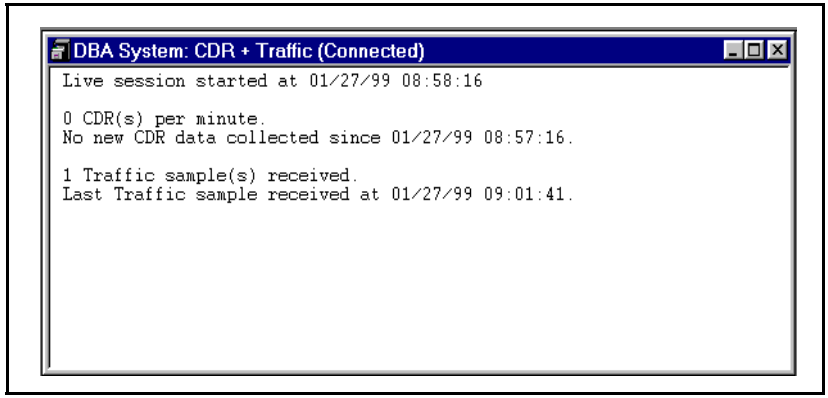


Figure 128
Sample session window displaying Statistics


DBA System: CDR + Traffic (Connected)
Live session started at 01/27/99 08:58:16
0 CDR(s) per minute.
No new CDR data collected since 01/27/99 08:57:16.
1 Traffic sample(s) received.
Last Traffic sample received at 01/27/99 09:01:41.

You can use the following Edit menu commands to handle text in the session window.

- **Copy** to copy text from the session window.
- **Select All** to select all text in the session window.
- **Find** to locate selected text in the session window.

M1 Database Disaster Recovery

M1 Database Disaster Recovery provides a quick way to perform a Meridian 1 data base backup and restore, or to schedule a data base backup. You can schedule or manually start a backup operation, and the application connects to the switch and retrieves the data base files. You can manually start a restore operation to restore the data base file to the PBX.

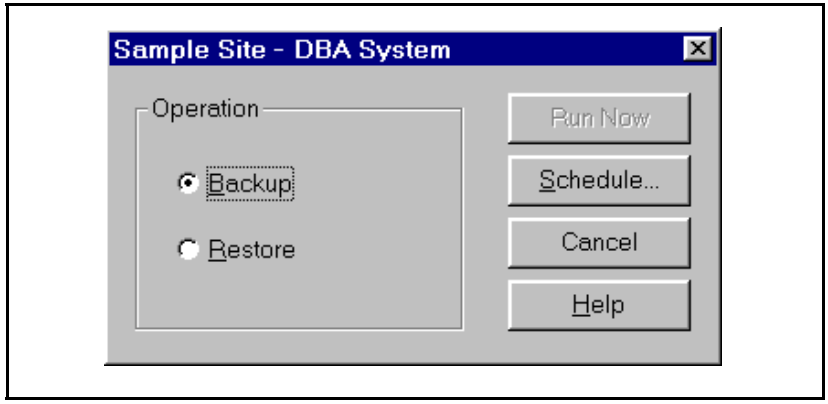
> ***Note:*** M1 Database Disaster Recovery runs separate from the normal Meridian 1 data base backup feature: Electronic Data Dump (EDD).

1 Open and select a session window.

2 Select **M1 Database Disaster Recovery** from the File menu.

The M1 Database Disaster Recovery dialog box opens. (See Figure 129.)

Figure 129
M1 Database Disaster Recovery dialog box



3 Click on one of the two radio buttons to select an operation:

- **Backup** - back up Meridian 1 data base files to the PC.

Note: A backup can be run on a PC that is not the PC used for collecting live CDR and/or Traffic data.

- **Restore** - transfer earlier backed up Meridian 1 data base files from the PC to the Meridian 1 system.

WARNING: The **Restore** operation overwrites the existing data base files on the Meridian 1 system. Before you use the **Restore** operation:

- Make sure that your back up files are valid.
- Make sure that no other PC is performing a **Backup** or **Restore**.

4 Select one of the following buttons:

- **Run Now** to begin the selected operation
- **Schedule** to indicate a time for routine data base backup. You cannot schedule a restore. The OTM Scheduling dialog box opens. Use the dialog box to schedule your data base backup. See "Schedule a Backup or Retrieval" on page 277.

The DBA application displays the status of the backup or restore.

Hide and restore the DBA main window

To maintain a live data session, you must keep the DBA main window open continuously. To minimize screen congestion, hide the DBA main window to remove it from the Windows Desktop. DBA remains active and the DBA tray icon continues to appear on the Windows Toolbar.

To hide the DBA main window do one of the following:

- Select Hide Application from the View menu.
- Click the Hide Main Window button on the toolbar.
- Double-click the DBA tray icon.

To restore your DBA main window, double-click the tray icon.

You can right-click on the tray icon to display a pop up menu containing the menu items, **Hide Window** or **Restore Window**. Use these commands to hide or restore the DBA main window, or select **Exit** to end the program.

Appendix A: Script File Summary

This appendix contains a list of all of the script files used for the OTM applications. A script is a pre-written program which contains a set of commands and functions required to perform specific activities. Some scripts are defined for specific PC and Meridian 1 configurations and are therefore selected based on each user's configuration. Most OTM scripts, however, are defined for the general operation of the OTM applications and are therefore automatically selected to perform specific functions within OTM.

Common Services scripts

The following script files are used by the OTM Common Services applications. They are automatically selected whenever you run OTM and apply to all of the OTM applications as a whole. You do not need to select these script files to perform a required function.

HAYESMDM.SCR	Functional script used by Common Services applications for connection with Hayes compatible modems
CUSTMDM.SCR	Functional script used by Common Services applications for connection with customized modems
M1MODEM.SCR	Functional support script used to access far-end equipment (e.g., dispatcher modems)
ERROR.SCR	Functional script required for error handling

Telecom Billing System scripts

The following script files are used by the Telecom Billing System to perform data collection. Select the script file that matches your data collection and processing requirements.

Real time CDR data collection

The following script files are used for real time CDR data collection from the Meridian 1; no buffer unit required.

SL1OLD.COL	Real time data collection script for Old format CDR.
SL1NEW.COL	Real time data collection script for New format CDR.

CDR data collection from MDR-2000

The following script file is used for data collection from an MDR-2000 buffer unit.

MDR2000.COL	Data collection script which collects New format CDR from MDR-2000 to produce normalized CDR (erases contents of buffer). MDR-2000 requires a chip which is compatible with X11 Release 23.

Sample data collection

The following script file is used to collect CDR data from a sample file. This is used for testing purposes.

SAMPLE.COL	Data collection script which collects sample CDR data from sample file in the Telecom Billing System directory.

Traffic Analysis scripts

The script files used by OTM Traffic Analysis provide the main functions required for traffic data collection and report generation. The data collection script files are selected when you enter your Meridian 1 and communications parameters. The report generation script files are automatically selected when you generate reports.

Real time traffic data collection

The following script files are used for real time traffic data collection (no buffer unit). They will be automatically selected when you set up this site for real time traffic data collection (from the OTM Site Configuration application).

LD2.SCR	Main traffic data collection scripts
LD2INI.SCR	Functional script used by LD2.SCR (used to initialize Meridian 1 to have collection performed hourly)
LOGSL1.SCR	Functional script used by LD2.SCR

Traffic data collection from MDR-2000

The following script files are used for traffic data collection from an MDR-2000 buffer unit. They will be automatically selected when you set up this site for traffic data collection through the MDR-2000 buffer unit (from the OTM Site Configuration application).

M2K.SCR	Main traffic data collection script
M2KINI.SCR	Functional script used by M2K.SCR (used to initialize Meridian 1 to have collection performed hourly in pass-through mode)

Traffic data collection from PollCat II/III

The following script file is used for traffic data collection from the PollCat II/III buffer units. It will be automatically selected when you set up this site for traffic data collection using the PollCat II/III buffer units (from the OTM Site Configuration application).

POLL.SCR	Main traffic data collection script

Traffic data collection from AT1/AT2

The following script files are used for traffic data collection from the AT1 and AT2 buffer units. They will be automatically selected when you set up this site for traffic data collection using the AT1 or AT2 buffer units (from the OTM Site Configuration application).

TSB1.SCR	Main traffic data collection script for AT1 buffer unit
TSB2.SCR	Main traffic data collection script for AT2 buffer unit

Traffic data collection from SEB II

The following script file is used for traffic data collection from the SEB II buffer unit. It will be automatically selected when you set up this site for traffic data collection using the SEB II buffer unit (From the OTM Site Configuration application).

SEBTRAF.SCR	Main traffic data collection script

Traffic data collection from Sentinel 2000

The following script file is used for traffic data collection from the Sentinel 2000 buffer unit. It will be automatically selected when you set up this site for traffic data collection using the Sentinel 2000 buffer unit (from the OTM Site Configuration application).

SNLTRAF.SCR	Main traffic data collection script

Traffic Analysis report generation

The following script files are used for report generation. They are automatically selected when you generate Traffic Analysis reports.

AUXPLK.SCR	AVGSOA.SCR	CALPRK.SCR	CBKQUE.SCR
CONSOL.SCR	CSAML1.SCR	CSAML2.SCR	CSAML3.SCR
CSAML4.SCR	CSAML5.SCR	CSAML6.SCR	CSAMLI.SCR
CSAMLK.SCR	CUSCON.SCR	DCHANL.SCR	DTDLAY.SCR
DTNSPD.SCR	FEAKEY.SCR	GLOBAL.SCR	GLPTRF.SCR
GMSGAP.SCR	GNTLPS.SCR	GOHQUE.SCR	GPCLTB.SCR

GPROCL.SCR	GROUTL.SCR	GSUTRF.SCR	GTRNKS.SCR
ICONSL.SCR	IMTCHL.SCR	INPMSG.SCR	INTRKG.SCR
ISDNPD.SCR	ISDNPM.SCR	ISDNPT.SCR	JCTRAF.SCR
JCTRGP.SCR	LPTRAF.SCR	MICRO.SCR	MSGATQ.SCR
MUSBRD.SCR	NCOSVC.SCR	NETLPS.SCR	NETWKS.SCR
NTATSV.SCR	OHKOVT.SCR	OHKQUE.SCR	OMTCHL.SCR
OUTMSG.SCR	PCTLTB.SCR	PRADIO.SCR	PROCLD.SCR
RADPAG.SCR	RANBRD.SCR	RTLREQ.SCR	SELTRM.SCR
SLTRAF.SCR	SRADIO.SCR	SUMCCO.SCR	SUMICO.SCR
SUMSYS.SCR	SUMTRK.SCR	SVCLPS.SCR	TMESSG.SCR
TRUNKS.SCR	TSETST.SCR	WATCON.SCR	WPRCLD.SCR
WTRNKS.SCR			

The following script files are used for the Data Parser as part of the report generation process. They are automatically selected when processing data for Traffic Analysis reports.

TFC000.SCR	TFC001.SCR	TFC002.SCR	TFC003.SCR
TFC004.SCR	TFC005.SCR	TFC006.SCR	TFC007.SCR
TFC008.SCR	TFC009.SCR	TFC10X.SCR	TFC101.SCR
TFC105.SCR	TFN001.SCR	TFN002.SCR	TFN101.SCR
TFS000.SCR	TFS001.SCR	TFS002.SCR	TFS003.SCR
TFS004.SCR	TFS005.SCR	TFS007.SCR	TFS008.SCR
TFS009.SCR	TFS010.SCR	TFS011.SCR	TFS012.SCR
TFS013.SCR	TFS50X.SCR	TFS101.SCR	TFS102.SCR
TFS105.SCR	TFS41X.SCR	TRAFFIC.SCR	TRFAXS.SCR
TRFCDR.SCR	TRFCUS.SCR	TRFNET.SCR	TRFSYS.SCR

Call Tracking scripts

The following script files are used by Call Tracking to perform data collection and real time monitoring. Certain script files are automatically selected when you enter your configuration parameters in the OTM Site Configuration application. These represent the common scripts for data collection.

For example, if you define SDI1 to have real time CDR data collection performed from it, then SDI1 will be configured to run the real time CDR data collection scripts SL1.SCR and SL1LOGIN.SCR.

If you collect CDR data from a data file (e.g., if you select the File option from the Call Tracking Communications data base), then you can select the filename from which you will collect the CDR data and then select a script filename for that particular format of CDR data. For example, if you select a file for data collection which contains normalized CDR data, then you would select the script file COLLECT.SCR.

Real time CDR data collection

The following script files are used for real time CDR data collection from the Meridian 1; no buffer unit is required.

SL1.SCR	Real time data collection script for Old format CDR
SL1NEW.SCR	Real time data collection script for New format CDR
SL1NEWX.SCR	Real time data collection script for New format CDR; supports X11 Release 23
SL1EURO.SCR	Real time data collection script for New format CDR with Periodic Pulse Metering
SL1EUROX.SCR	Real time data collection script for “New” format CDR with Periodic Pulse Metering; supports X11 Release 23
SL1LOGIN.SCR	Functional script used by above-mentioned data collection scripts

CDR data collection from MDR-2000

The following script files are used for data collection from an MDR-2000 buffer unit.

COLLECT.SCR	Data collection script which collects Old format CDR from MDR-2000 to produce normalized CDR (erases contents of buffer)
COLLECTX.SCR	Data collection script which collects New format CDR from MDR-2000 to produce normalized CDR (erases contents of buffer); MDR-2000 requires a chip which is compatible with X11 Release 23
2000FD.SCR	Data collection script which monitors in real time Old format CDR from an MDR-2000
2000FDX.SCR	Data collection script which monitors in real time New format CDR from an MDR-2000; MDR-2000 requires a chip which is compatible with X11 Release 23

CDR data collection from PollCat II/III

The following script files are used for data collection from the PollCat II/III buffer units.

POLLCDR.SCR	CDR data collection script for PollCat II/III buffer units
PARSESL1.SCR	Functional script used by POLLCDR.SCR
POLLNEWX.SCR	CDR data collection script for PollCat II/III buffer units; supports X11 Release 23
NEWCDRX.SCR	Functional script used by POLLNEWX.SCR

CDR data collection from AT1/AT2

The following script files are used for data collection from the AT1 and AT2 buffer units.

AT1CDR.SCR	CDR data collection script for AT1 buffer unit
AT2CDR.SCR	CDR data collection script for AT2 buffer unit
PARSESL1.SCR	Functional script used by AT1CDR.SCR and AT2CDR.SCR script files

AT1NEWX.SCR	New format CDR data collection script for AT1 buffer unit; supports X11 Release 23
AT2NEWX.SCR	New format CDR data collection script for AT2 buffer unit; supports X11 Release 23
NEWCDRX.SCR	Functional script used by AT1NEWX.SCR and AT2NEWX.SCR script files

CDR data collection from SEB II

The following script files are used for data collection from the SEB II buffer unit.

SEB.SCR	CDR data collection script for SEB II buffer unit
PARSESL1.SCR	Functional script used by SEB.SCR script file
SEBNEWX.SCR	New format CDR data collection script for SEB II buffer unit; supports X11 Release 23
NEWCDRX.SCR	Functional script used by SEBNEWX.SCR script file

CDR data collection from Sentinel 2000

The following script files are used for data collection from a Sentinel 2000 buffer unit.

SNLCDR.SCR	CDR data collection script for Sentinel 2000 buffer unit
SNLCDRX.SCR	CDR data collection script for Sentinel 2000 buffer unit; supports X11 Release 23

Call Tracking alarm scripts

The following script files are used for Call Tracking alarms. They will be automatically selected when you define the Call Tracking alarms.

CMALARM.SCR	Call Tracking alarm script
CMPAGER.SCR	Call Tracking alarm pager script

CDR data collection modem scripts

The following script files are supporting function scripts used by all CDR data collection scripts for Call Tracking. The appropriate script will be automatically used when you select Hayes or Custom as the format for the modem for CDR data collection from the OTM Site Configuration application.

If you enter custom modem information when setting up a site, then the custom modem script file will be updated with the appropriate parameters.

HAYES.SCR	Functional script used by all CDR data collection scripts in Call Tracking for connection with Hayes compatible modems
CUSTOM.SCR	Functional script used by all CDR data collection scripts in Call Tracking for connection with customized modems (updated with correct parameters)

Script usage table

The following table lists the types of scripts which would be selected for different scenarios for Call Tracking. These represent the main scripts which can be selected to suit a particular scenario. All other scripts will automatically selected depending on these script selections.

Table A-1
Script usage table

To	Use
Perform real time CDR data collection from Meridian 1	SL1.SCR
Collect CDR from MDR-2000 buffer unit	COLLECT.SCR
Collect CDR from PollCat II/III buffer units	POLLCDR.SCR
Collect CDR from AT1 buffer unit	AT1CDR.SCR
Collect CDR from AT2 buffer unit	AT2CDR.SCR
Collect CDR from SEB II buffer unit	SEB.SCR
Collect Traffic data from SEB II buffer unit	SEBTRAF.SCR
Collect CDR from Sentinel 2000 buffer unit	SNLCDR.SCR

Optivity Telephony Manager

Common Services

User Guide

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